Applying IFRS

# Disclosure of COVID-19 impact on expected credit losses of banks

An analysis based on a sample of large UK and European banks at year-end 2020

**July 2021**

EY

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# 1. Background

This publication provides our observations on the impact of COVID-19 on the expected credit loss disclosures published by a sample of large UK and European banks in their IFRS financial statements at year-end 2020.

The COVID-19 pandemic ('COVID-19' or 'the pandemic') has developed rapidly in 2020, with a significant impact on the world economy. Measures taken to contain it have affected economic activity, which, in turn, has implications for financial reporting. Many countries have imposed travel bans and lockdowns on millions of people and people in many locations remain subject to travel-related restrictions and quarantine measures. Businesses are dealing with lost revenue and disrupted supply chains. While most countries have eased the previously imposed lockdowns, the relaxation has been gradual and, in some cases, they have had to re-impose stricter measures to deal with renewed outbreaks. As a result of the disruption to businesses, millions of workers have lost their jobs and many businesses, especially those that involve close in-person contact, have been adversely affected. COVID-19 has also resulted in significant volatility in financial and commodities markets worldwide. Various governments have provided both financial and non-financial assistance to disrupted industry sectors and the affected businesses and other organisations. There remains significant divergence in the speed at which vaccines are being deployed globally. In addition, the emergence of new variants of the virus emphasise the on-going challenges and uncertainty surrounding economic activity, which continues to be significantly impacted by COVID-19. The timing and degree of recovery will depend on how quickly countries are able to roll out vaccines, the level of infections and the nature and level of continuing support to mitigate the impact of the pandemic particularly on vulnerable economic sectors.

COVID-19 impacts many areas of accounting and reporting for all industries, as outlined in our *Applying IFRS* series on accounting considerations of the coronavirus pandemic.[1] While the specific areas of judgement may not change, the impact of COVID-19 resulted in the application of further judgement within those areas due to the evolving nature of the pandemic and the limited recent experience of the economic and financial impacts of such an event. Also, significant changes to estimates may need to be made in the measurement of entities' assets and liabilities.

In December 2020, we issued *Applying IFRS: Disclosure of COVID-19 impact on expected credit losses for banks*, which focused on our expectations regarding the impact of COVID-19 on the expected credit loss (ECL) disclosures provided by banks. This included examples of disclosures provided in the published interim financial statements of a sample of large UK and European banks for the half-year ended 30 June 2020, prepared in accordance with IAS 34 *Interim Financial Reporting*. In particular, we considered the disclosure requirements for credit risk included in IFRS 7 *Financial Instruments: Disclosures*.

In this edition, we focus on our observations regarding the impact of COVID-19 on the ECL disclosures provided by a sample of large UK and European banks in their annual financial statements prepared in accordance with IFRS for the year ended 31 December 2020, and how we expect these to evolve going forward. We have provided examples of disclosures presented in these financial statements and we have also included extracts from published results' presentations and management commentary, when they set examples of

[1] ey.com/IFRS.

disclosures which could be provided in the financial statements. The extracts are presented in each section in alphabetical order, by bank.

The views expressed in this publication may evolve as practice develops. As the situation continues to evolve, new application issues will continue to arise and regulators in various jurisdictions may set expectations on how certain disclosures should be provided. The impact of COVID-19 will also depend on the underlying facts and circumstances specific to each entity, which means that, in seemingly similar situations, differences in presentation and disclosure may be appropriate.

We believe that the examples in this publication provide clear and transparent disclosures in respect of the area they address. However, they are by no means an exhaustive list of all relevant disclosures provided by banks and their applicability depends on the facts and circumstances of each entity, including materiality. Our expectations are based on the requirements for credit risk disclosures under IFRS 7, but also consider any additional disclosures that we believe would provide useful information for users in the current economic environment. It must be stressed that even though not all of the comparative information presented by banks has been included in all extracts in this publication, as they were not necessary to illustrate the particular disclosure, comparatives for all material disclosures presented in the financial statements are required under IAS 1.38, as well as the accompanying comments regarding any material year-on-year changes.

Extracts from financial statements presented in this publication are reproduced for illustrative purposes. They have not been subject to any review on their compliance with IFRS or any other requirements, such as local capital market rules. We also note that the extracts presented should be read in conjunction with the rest of the information provided in the full financial statements and management commentaries in order to fully understand their intended purpose. They are presented in isolation in this publication to illustrate items referred to in the text.

This publication supplements our *Applying IFRS* series on accounting considerations of the coronavirus pandemic and should be read in conjunction with it. Please see *ey.com/IFRS* for our most recent IFRS COVID-19 publications.

## 2. Overall expected credit losses (ECL)

### What we expected

Banks have embedded the impact of the pandemic into their estimation processes – either by amending their modelled ECL or by applying post-model adjustments and management overlays - and incorporated the relevant information in their disclosures regarding the movement in the ECL.

***Disclosure of the impact of COVID-19 pandemic on the ECL of banks***

For year-end December 2020, banks were especially expected to provide information regarding the movement in the ECL estimate compared to the last annual financial statements. Although many banks isolated the effects of COVID-19 in their interim reporting, the effect of the pandemic became more embedded in the estimation process throughout the year. We expected banks to emphasise how much the current circumstances affected the revision of macroeconomic assumptions, weights of the scenarios, significant increase in credit risk ('SICR') triggers and the different forms of adjustments or overlays added to reflect the specific effects of the crisis, including the impact of government support schemes and/or how specific sectors are expected to react.

Banks are required under IFRS 7 to provide qualitative and quantitative disclosures of credit risk. It was, therefore, expected that the effect of current circumstances would be reflected and commented through the following disclosures:

- The quantitative reconciliation (preferably in a tabular format) of the ECL provision during the year, including movements across stages
- The reconciliation of the total gross carrying amount to help enable users of financial statements to understand the changes in the loss allowance
- The breakdown of the overall gross carrying amount and associated ECL provision as of the end of the period by stage, segment of customer and product
- A separate disclosure of the impact of material overlays on the ECL estimate (refer to Section 4 'Overlays and post-model adjustments')
- An explanation of the key judgements applied in estimating the ECL provision for the period
- An explanation of how the assessment of whether there has been a significant increase in credit risk (SICR) has been made (e.g., based on additional information collected, when available, or assessed on a portfolio basis or via an overlay and including the effect of government support)
- Information on large single name exposures that have moved to stage 3 or have been written off, if material. This could include the sector and size of each individual exposure

Given the unusual features of this economic crisis and their idiosyncratic effects on specific sectors and categories of borrowers, increased granularity in these disclosures was expected, either directly in the tables or through additional comments provided to supplement the usual tables.

***Payment deferral schemes, guaranteed loans and other forms of customer support***

Banks were encouraged, recommended, or required by governments and regulators in many jurisdictions to provide various forms of payment deferral schemes and other forms of customer support (e.g., by reducing or waiving interest and/or fees on certain facilities) or to offer new loans to customers

under different types of government-backed schemes. Further forms of relief and support programmes were offered by banks on a voluntary basis.

Banks were expected to provide disclosures in respect of the key characteristics of such programmes where relevant, including (but not limited to) the following:

- A description of the key terms of the programme, such as whether it is an interest payment holiday or another form of financial support, e.g., a loan provided with the support of a government guarantee or a low-interest (or interest-free) loan and other similar facilities
- In order to show the magnitude and impact of these programmes:
  - The total gross carrying amount of the related exposures and corresponding ECL by stage
  - Whether it is a mandatory scheme or a voluntary initiative of the bank, and if the scheme is considered to be in the scope of regulatory guidelines on moratoria granted in response to COVID-19
- Geographical and sectoral distribution of exposures
- The accounting impact of such measures, including possible changes in accounting policies and accounting estimates.

## What we observed

Overall, the level of disclosures provided by large banking groups in their annual financial statements for 2020 was in line with our expectations. Banks provided increased disclosures for the main areas of focus and the impact on ECL as a result of the pandemic, using different approaches to provide the relevant disclosures (e.g., graphs, tables, narrative).

Banks have provided a significant amount of information in their quantitative and qualitative credit risk disclosures. They have embedded the impact of the pandemic into their estimation processes – either by amending their modelled ECL or by applying post-model adjustments and management overlays - and incorporated the relevant information in their disclosures regarding the movement in the ECL.

We have seen an increase, or improvement, in the disclosures provided in the following areas:

- ECL charge and Cost of risk[2] – in particular, in relation to Stages 1 and 2 which have become more prominent
- Analyses by sector including those most vulnerable to the impact of COVID-19
- Forward looking scenarios – description of scenarios, weights and how banks have incorporated the impact of support measures – refer to Section 3 'Economic scenarios'
- Sensitivity analyses – refer to Section 5 'Sensitivity analysis'

Banks have significantly expanded the description of their estimation processes including risk assessment and staging, post-model adjustments and overlays including the governance policies put in place to monitor these changes – refer to Section 4 'Overlays and post-model adjustments'.

Banks have also provided disclosures in respect of the key characteristics of the various customer relief and support programmes they operated during the

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[2] Cost of risk refers to the ECL charge (annual or annualised) expressed as a percentage of the total loan book.

year. However, these are gradually winding down and the relevant disclosures are, therefore, less granular or prominent in the annual financial statements (as well as in presentations to investors and analysts) as compared to those presented in interim financial statements during 2020. We note that some European banks used the regulatory tables required by the European Banking Authority (EBA) in their financial statements to explain the impact of these measures on their ECL estimates.

## How we see it

Going forward, we would expect banks to maintain focus on the following areas in their ECL disclosures:

- Longer-term impact of the pandemic - this will manifest itself in different ways as some countries or banks will be affected more or less than others. The vulnerable sectors disclosures will continue to be useful (and how they may evolve over time) as well as any other changes in the banks' approach to support customers (as noted above) to address the needs of businesses and individuals emerging after the restrictions are lifted and the relief schemes are phased out.
- Provided the economic outlook remains positive, most of the customer support schemes are expected to wind down gradually. However, we would expect banks to continue to provide information in order to explain the development in the various portfolios primarily affected by them, as they are a key driver to understand the potential default suppression effect these measures may have had on the actual COVID-19 related losses.
- Where banks have become parties to longer-term arrangements to provide or receive funding relating to such schemes, they should continue to provide the relevant disclosures in their financial statements at the level of detail that corresponds to their significance.

The granularity of disclosures presented in respect of gross carrying amounts and the ECL allowance, as well as the reconciliations of the ECL allowance was generally the same as that presented in the prior year.

Overall, comparability and consistency remain a challenge. Whilst there is sufficient information in the financial statements to allow a comparison of cost of risk and coverage[3] ratios by stage across banks for their total book of loans to customers, this does not necessarily provide an appropriate basis for comparison without additional information in respect of the business models, markets and product mix of each bank. For example, well collateralised loans, like mortgages, attract less provisions by design. Furthermore, their sensitivity to the economic environment will vary depending, for example, on loans to value, local guarantee schemes and other forms of government unemployment support programmes. In contrast, unsecured lending, like credit cards is a riskier product which attracts more provisioning and it will also be more sensitive to the economic environment. Therefore, a bank with a significant credit card portfolio would generally show very different trends compared to a bank that mainly provides mortgages. In addition, country or market is another dimension that drives very different levels of cost of risk. Banks with a significant footprint outside their local markets, therefore, need to provide the relevant disclosures split on a geographical basis for their most significant markets to allow meaningful comparisons.

## How we see it

Whilst we consider the trend to provide more transparent information a positive step, we note a recurring theme of consistency and comparability. This emerges especially as a result of the fact that, while the disclosures have to satisfy the relevant reporting requirements, they do not need to conform to specific granular presentation formats. More importantly, there is high degree of judgement involved in the determination of the assumptions and segmentation that management considers most appropriate for each bank, which inevitably results in diversity in practice. Another contributing factor relates to local requirements, for example. banks in specific jurisdictions may have to comply with local presentation and disclosure requirements in addition to those in IFRS.

One way to assess the reasonableness of judgements and estimates made by banks, particularly in the current environment of significant uncertainty, is by comparing and benchmarking key indicators against a peer group, such as, for example, cost of risk, coverage ratio[3] and the proportion of Stage 2 exposures in relation to the total portfolio. This is very difficult to achieve when the necessary information needed is constructed using different analyses, groupings and classifications.

One way to promote comparability might be for banks to consider ways of providing the key information noted below, using a uniform product classification system:

- The allocation of exposures and related ECL allowance by stage
- The ECL charge for the period, also split by stage
- The reconciliation of opening and closing balance, by stage, for gross exposures and related ECL allowance respectively

For example, a uniform product classification system could leverage standardised disclosures prepared for regulatory purposes. Another example of a useful split could include the following (to be presented separately for each material market):

- Mortgages
- Credit cards or other forms of unsecured retail lending
- Wholesale, with a distinction between big corporates and smaller businesses, like SMEs, given size is a critical factor which would allow more relevant comparisons. Sectors is also a key dimension, especially in the current circumstances
- Finally, any other specific product, if material (such as car financing or highly-collateralised loans) would need to be specifically identified and disclosed rather than included under an "Others" category

[3] Coverage ratio refers to the total ECL allowance as a percentage of the total loan book.

## Examples

### *Disclosure of the impact of COVID-19 pandemic on the ECL of banks*

In its 2020 annual report, ABN AMRO provided a disclosure by product, gross carrying amount and ECL allowance by stage, coverage ratios and stage ratios including comparatives in one table followed by explanatory commentary including the impact of COVID-19 on its ECL allowance.

***Extract 1[4]: ABN AMRO, Annual report 2020, Impact of COVID-19 on overall ECL*** — *The Netherlands*

**Exposures per stage** Audited

**Coverage and stage ratios** Audited

| | 31 December 2020 | | | | 31 December 2019 | | | |
|---|---|---|---|---|---|---|---|---|
| (in millions) | Gross carrying amount | Allowances for credit losses[2] | Coverage ratio | Stage ratio | Gross carrying amount | Allowances for credit losses[2] | Coverage ratio | Stage ratio |
| **Stage 1** | | | | | | | | |
| **Loans and advances banks** | **3,399** | **6** | **0.2%** | **100.0%** | **5,016** | **5** | **0.1%** | **100.0%** |
| Residential mortgages | 135,407 | 14 | 0.0% | 93.0% | 140,244 | 7 | 0.0% | 94.6% |
| Consumer loans | 9,707 | 38 | 0.4% | 86.4% | 10,999 | 30 | 0.3% | 89.5% |
| Corporate loans | 64,517 | 243 | 0.4% | 74.4% | 84,155 | 137 | 0.2% | 85.3% |
| Other loans and advances customers | 7,675 | | 0.0% | 99.3% | 6,218 | | 0.0% | 98.8% |
| **Total loans and advances customers** | **217,305** | **296** | **0.1%** | **86.4%** | **241,615** | **174** | **0.1%** | **91.0%** |
| **Stage 2** | | | | | | | | |
| **Loans and advances banks** | | | **0.0%** | **0.0%** | **1** | | **0.4%** | **0.0%** |
| Residential mortgages | 9,141 | 44 | 0.5% | 6.3% | 6,943 | 68 | 1.0% | 4.7% |
| Consumer loans | 1,068 | 41 | 3.8% | 9.5% | 928 | 70 | 7.5% | 7.5% |
| Corporate loans | 15,356 | 316 | 2.1% | 17.7% | 9,125 | 119 | 1.3% | 9.3% |
| Other loans and advances customers | 37 | | 0.3% | 0.5% | 70 | 1 | 1.6% | 1.1% |
| **Total loans and advances customers** | **25,602** | **400** | **1.6%** | **10.2%** | **17,065** | **258** | **1.5%** | **6.4%** |
| **Stage 3** | | | | | | | | |
| **Loans and advances banks** | | | | **0.0%** | | | | **0.0%** |
| Residential mortgages | 1,124 | 58 | 5.2% | 0.8% | 1,038 | 65 | 6.2% | 0.7% |
| Consumer loans | 456 | 215 | 47.2% | 4.1% | 368 | 198 | 53.8% | 3.0% |
| Corporate loans | 6,873 | 2,494 | 36.3% | 7.9% | 5,331 | 1,727 | 32.4% | 5.4% |
| Other loans and advances customers | 21 | 3 | 14.6% | 0.3% | 4 | 4 | 100.0% | 0.1% |
| **Total loans and advances customers** | **8,474** | **2,771** | **32.7%** | **3.4%** | **6,740** | **1,993** | **29.6%** | **2.5%** |
| **Total of stages 1, 2 and 3** | | | | | | | | |
| **Total loans and advances banks** | **3,399** | **6** | **0.2%** | | **5,016** | **5** | **0.1%** | |
| Residential mortgages | 145,672 | 116 | 0.1% | | 148,225 | 140 | 0.1% | |
| Consumer loans | 11,232 | 294 | 2.6% | | 12,294 | 298 | 2.4% | |
| Corporate loans | 86,745 | 3,053 | 3.5% | | 98,610 | 1,982 | 2.0% | |
| Other loans and advances customers | 7,733 | 3 | 0.0% | | 6,292 | 6 | 0.1% | |
| **Total loans and advances customers[1]** | **251,381** | **3,467** | **1.4%** | | **265,421** | **2,426** | **0.9%** | |
| **Loans at fair value through P&L** | **406** | | | | **1,267** | | | |
| **Fair value adjustments from hedge accounting on loans and advances customers** | **3,838** | | | | **3,342** | | | |
| Total loans and advances banks | 3,399 | 6 | 0.2% | | 5,016 | 5 | 0.1% | |
| Total loans and advances customers | 255,626 | 3,467 | 1.4% | | 270,030 | 2,426 | 0.9% | |
| **Total loans and advances** | **259,025** | **3,472** | **1.3%** | | **275,046** | **2,431** | **0.9%** | |
| Other balance sheet items | 140,083 | 13 | 0.0% | | 102,443 | 4 | 0.0% | |
| **Total on-balance sheet** | **399,108** | **3,485** | **0.9%** | | **377,489** | **2,436** | **0.6%** | |
| Irrevocable loan commitments and financial guarantee contracts | 58,653 | 48 | 0.1% | | 65,419 | 16 | 0.0% | |
| Other off-balance sheet items | 5,535 | | | | 6,733 | | | |
| **Total on- and off-balance sheet** | **463,296** | **3,533** | **0.8%** | | **449,641** | **2,452** | **0.5%** | |

[1] Excluding loans at fair value through P&L and fair value adjustments from hedge accounting.
[2] The allowances for credit losses excludes allowances for financial investments held at FVOCI (31 December 2020: EUR 1 million; 31 December 2019: EUR 1 million).

The stage 3 impaired ratio increased to 3.4% in 2020 (2019: 2.5%). This was the result of inflow from stages 1 and 2 in corporate loans. In addition to stage migrations, the increase in the stage 3 impaired ratio was caused by a net decrease in exposure to corporate loans in the other stages, partly as a result of the wind-down of the non-core CIB portfolio.

[4] *ABN AMRO Annual Report 2020*, Risk, Funding and Capital, Credit Risk, pages 110-111.

The stage 3 coverage ratio increased to 32.7% at year-end 2020 (2019: 29.6%). In response to the outbreak of the Covid-19 pandemic, all stage 3 corporate clients were re-evaluated which resulted in increases in allowances. Increases for existing stage 3 clients were mainly recorded in the energy services sector, while the stage 3 coverage ratio also rose because of increases for new inflow and existing clients in the food and shipping sectors in CIB and CB.

As a result of measures taken to mitigate the economic impact of Covid-19, the stage 2 ratio increased to 10.2% (2019: 6.4%). All credit portfolios were reviewed to identify any significant increase in credit risk in the context of IFRS 9. This resulted in an increase in stage 2 exposure, mainly in corporate loans. At the start of Covid-19, several sub-sectors within Commercial Banking were identified as having a significant increased credit risk and were therefore transferred to stage 2. In the subsequent months, this subsector-based assessment was replaced by individual assessments. For Retail Banking, identification of significant increased credit risk was initially carried out by profession. During the second half of 2020, this assessment, too, was replaced by individual assessments.

The stage 2 coverage ratio increased to 1.6% in 2020 (2019: 1.5%). This was mainly the result of management overlays , which were taken in Commercial Banking for risks not fully captured by the risk parameters, and in CIB for risk costs related to the wind-down of the non-core portfolio. Without management overlays, the stage 2 coverage ratio for corporate loans would have been 1.2% at year-end 2020 (2019: 1.3%). The increase in the stage 1 coverage ratio for corporate loans to 0.4% (2019: 0.2%) was also entirely related to management overlays.

The stage 2 coverage ratios for consumer loans and residential mortgages decreased at year-end 2020, both mainly as a result of decreased management overlays. For residential mortgages, a release was recorded for the total management overlay for interest-only mortgages. For consumer loans, there was a transfer of service loans to both stage 1 and stage 3 during the year. This resulted in a release of the management overlay in stage 2, and therefore in a decrease in the coverage ratio.

Barclays PLC ("Barclays") provided disclosures in its 2020 annual report, of its loans and advances at amortised cost by stage by product, including coverage ratios by stage. It also presented a reconciliation of the ECL movement to impairment charge/release for the period. This is followed by another extract of disclosures in respect of selected sectors most impacted by COVID-19, in which Barclays presented gross exposure and impairment allowance by stage, including a percentage of total wholesale exposures.

***Extract 2[5]: Barclays PLC, Annual Report 2020 – Expected credit losses and impact of COVID-19 on selected sectors*** *United Kingdom*

## Overall ECL disclosures[6]

**Loans and advances at amortised cost by product (audited)**

The table below presents a breakdown of loans and advances at amortised cost and the impairment allowance with stage allocation by asset classification.

**Loans and advances at amortised cost by product (audited)**

| As at 31 December 2020 | | Stage 2 | | | | | |
|---|---|---|---|---|---|---|---|
| **Gross exposure** | Stage 1 £m | Not past due £m | <=30 days past due £m | >30 days past due £m | Total £m | Stage 3 £m | Total £m |
| Home loans | 138,639 | 16,651 | 1,785 | 876 | 19,312 | 2,234 | 160,185 |
| Credit cards, unsecured loans and other retail lending | 33,021 | 9,470 | 544 | 306 | 10,320 | 3,172 | 46,513 |
| Wholesale loans | 119,304 | 19,501 | 1,097 | 776 | 21,374 | 3,591 | 144,269 |
| **Total** | 290,964 | 45,622 | 3,426 | 1,958 | 51,006 | 8,997 | 350,967 |
| **Impairment allowance** | | | | | | | |
| Home loans | 33 | 57 | 13 | 14 | 84 | 421 | 538 |
| Credit cards, unsecured loans and other retail lending | 680 | 2,382 | 180 | 207 | 2,769 | 2,251 | 5,700 |
| Wholesale loans | 320 | 650 | 50 | 11 | 711 | 1,066 | 2,097 |
| **Total** | 1,033 | 3,089 | 243 | 232 | 3,564 | 3,738 | 8,335 |
| **Net exposure** | | | | | | | |
| Home loans | 138,606 | 16,594 | 1,772 | 862 | 19,228 | 1,813 | 159,647 |
| Credit cards, unsecured loans and other retail lending | 32,341 | 7,088 | 364 | 99 | 7,551 | 921 | 40,813 |
| Wholesale loans | 118,984 | 18,851 | 1,047 | 765 | 20,663 | 2,525 | 142,172 |
| **Total** | 289,931 | 42,533 | 3,183 | 1,726 | 47,442 | 5,259 | 342,632 |
| **Coverage ratio** | % | % | % | % | % | % | % |
| Home loans | – | 0.3 | 0.7 | 1.6 | 0.4 | 18.8 | 0.3 |
| Credit cards, unsecured loans and other retail lending | 2.1 | 25.2 | 33.1 | 67.6 | 26.8 | 71.0 | 12.3 |
| Wholesale loans | 0.3 | 3.3 | 4.6 | 1.4 | 3.3 | 29.7 | 1.5 |
| **Total** | 0.4 | 6.8 | 7.1 | 11.8 | 7.0 | 41.5 | 2.4 |

| Reconciliation of ECL movement to impairment charge/(release) for the period | £m |
|---|---|
| *Home loans* | *128* |
| *Credit cards, unsecured loans and other retail lending* | *2,597* |
| *Wholesale loans* | *1,438* |
| **ECL movement excluding assets derecognised due to disposals and write-offs** | 4,163 |
| Recoveries and reimbursements[a] | (399) |
| Exchange and other adjustments[b] | 145 |
| Impairment charge on loan commitments and financial guarantees | 776 |
| Impairment charge on other financial assets[c] | 153 |
| **Income statement charge for the period** | 4,838 |

**Notes**

a Recoveries and reimbursements includes £364m for reimbursements expected to be received under the arrangement where Group has entered into financial guarantee contracts which provide credit protection over certain loans assets with third parties. Cash recoveries of previously written off amounts to £35m.

b Includes foreign exchange and interest and fees in suspense.

c Other financial assets subject to impairment not included in the table above include cash collateral and settlement balances, financial assets at fair value through other comprehensive income and other assets. These have a total gross exposure of £180.3bn (December 2019: £149.3bn) and impairment allowance of £165m (December 2019: £24m). This comprises £11m ECL (December 2019: £12m) on £175.7bn Stage 1 assets (December 2019: £148.5bn), £9m (December 2019: £2m) on £4.4bn Stage 2 fair value through other comprehensive income assets, cash collateral and settlement assets (December 2019: £0.8bn) and £145m (December 2019: £10m) on £154m Stage 3 other assets (December 2019: £10m).

## Impact of COVID-19 on selected sectors

**Loans and advances at amortised cost by selected sectors**

The table below presents a breakdown of loans and advances at amortised cost and the impairment allowance, with gross exposure and stage allocation for selected industry sectors within the wholesale loans portfolio. The industry sectors have been selected based upon the level of management focus they have received following the onset of the COVID-19 pandemic. The credit risk industry concentration disclosure in the Analysis of the concentration of credit risk section represents all the industry categories and the below only covers a subset of that table.

The gross loans and advances to selected sectors have increased over the year as a result of additional drawdowns on committed credit lines provided by the bank. Overall limits and exposures have remained broadly stable over the year whilst provisions have increased in light of the heightened stress. The wholesale portfolio also benefits from a hedge protection programme that enables effective risk management against systemic losses.

[5] *Barclays PLC, Annual Report 2020*, Risk Management, Credit Risk, pages 173-174 and 176.

[6] The bank presented comparatives for 2019 which have not been included in this illustrative extract.

**Loans and advances at amortised cost by selected sectors**

| As at 31 December 2020 | Gross exposure Stage 1 £m | Gross exposure Stage 2 £m | Gross exposure Stage 3 £m | Gross exposure Total £m | Impairment allowance Stage 1 £m | Impairment allowance Stage 2 £m | Impairment allowance Stage 3 £m | Impairment allowance Total £m |
|---|---|---|---|---|---|---|---|---|
| Air travel | 367 | 525 | 56 | 948 | 9 | 27 | 23 | 59 |
| Hospitality and leisure | 4,440 | 2,387 | 313 | 7,140 | 53 | 115 | 61 | 229 |
| Oil and gas | 1,754 | 854 | 465 | 3,073 | 31 | 27 | 140 | 198 |
| Retail | 3,907 | 1,153 | 283 | 5,343 | 78 | 51 | 108 | 237 |
| Shipping | 308 | 389 | 12 | 709 | 2 | 30 | 1 | 33 |
| Transportation | 1,148 | 253 | 125 | 1,526 | 19 | 10 | 57 | 86 |
| **Total** | 11,924 | 5,561 | 1,254 | 18,739 | 192 | 260 | 390 | 842 |
| Total of Wholesale exposures | 10% | 26% | 35% | 13% | 60% | 37% | 37% | 40% |

A £0.2bn adjustment has been applied to selected sectors in Stage 1 to increase the ECL coverage on these names in line with the average Stage 2 coverage of the respective sector. This adjustment is materially in response to the increased stress in these sectors not captured through the ECL models. An additional £0.1bn adjustment is held against undrawn exposure which does not appear in the table.

The coverage ratio for selected sectors has increased from 2.3% as at 31 December 2019 to 4.5% as at 31 December 2020.

In its 2020 annual financial report, BNP Paribas provided disclosures in respect of the impact of COVID-19 on selected sectors, including the percentage of the Group's gross balance sheet and off-balance sheet commitments per sector and stage 3 provisions as at 31 December 2020.

***Extract 3[7]: BNP Paribas, Annual financial report 2020, Impact of COVID-19 on selected sectors*** *France*

Industry risks are monitored in terms of gross exposure[(1)] and risk-weighted assets. Certain sectors, of which those considered sensitive to the consequences of the health crisis, are monitored more closely and are specifically reviewed, in particular:

- the leveraged finance sector:

  The Group's exposure to Leverage Buy-Out transactions ("LBO") rises to EUR 15.1 billion at 31 December 2020, or 0.8% of the Group's gross balance sheet and off-balance sheet commitments. These exposures are individually very small with an average amount of EUR 5 million per loan (EUR 17 million taking account of all business group exposures), and mainly concern European counterparties.

  Moreover, in accordance with the ECB Guidelines, the Group has put in place a system for monitoring companies whose leverage ratio exceeds the threshold set by the regulator;
- the shipping sector:

  The shipping sector covers a set of segments with very different dynamics: bulk, oil and gas tankers, container carriers, oil services, and cruises. In 2020, the consequences of the health crisis had various impacts on the shipping industry. Cruise business is the most-impacted segment with a near total docking of fleet at present. Offshore business continues to suffer from strong oversupply and lack of new projects, whereas Container carriers are enjoying a positive dynamic, thanks to changes in consumptions flows and logistic disorganisation. Bulk and Tankers segments are experiencing high market volatility.

  In 2020, the shipping industry faced new environmental constraints (International Maritime International Maritime Organisation (IMO) standards) involving investment efforts combined with a temporary immobilisation of the fleet.

  At 31 December 2020, the gross exposure to the shipping sector represented EUR 19.2 billion, *i.e.* 1.1% of the Group's on and off-balance sheet exposures. This exposure is predominantly driven by CIB (89%) and for the rest by Domestic Markets (10%), with a good geographical diversification of its clients. Doubtful loans represent 5.7% of Group exposure to the shipping sector and stage 3 provisions represent EUR 377 million;
- the aviation sector:

  Business activity in this sector is evenly split between airlines and aircraft leasing companies. The gross exposure is EUR 13.2 billion at 31 December 2020, *i.e.* 0.7% of the Group's total gross on- and off-balance sheet commitments. New origination financing is focused on the technologically latest-generation aircraft, which are more efficient and have a lower environmental impact (the average age of the fleet financed by the Group is 6.8 years, compared with 11.4 years for the industry). Although the sector has been strongly affected by the consequences of health crisis, the amount of doubtful loans remains low at 31 December 2020 representing 3.3% of the sector's outstandings. As aircraft financing is a highly collateralised business, stage 3 provisions are very low and represent EUR 54 million. In addition, collateral valuation was updated in 2020 in the context of the health crisis.
- the oil and gas sector:

  BNP Paribas' exposure to this sector is diversified. The commitments cover the entire value chain of the oil industry and concern major players (majors, national oil companies) in many countries. As a reminder, BNP Paribas stopped financing stakeholders whose main business is related to the unconventional hydrocarbons sector in 2017 and sold its dedicated financing business in the United States (Reserve Based Lending) in 2012. At 31 December 2020, the gross exposure of the portfolio amounted to EUR 35.1 billion (*i.e.* 2.0% of the Group's total gross on- and off-balance sheet commitments), nearly 54% of which are the majors and national oil companies. Close to 80% of counterparties are rated Investment Grade and commitments to non-Investment Grade counterparties have good collateral coverage. The outstanding amounts classified as doubtful represented 2.2% of the sector and stage 3 provisions amounted EUR 428 million at 31 December 2020;
- the hotel, tourism and leisure sector:

  At 31 December 2020, this sector represented EUR 17.3 billion of gross exposure (*i.e.* 1.0% of the Group's total gross on- and off-balance sheet commitments). The business covers various segments such as cruises, hotels, casinos and cafés and restaurants, with a strong geographical diversification. Exposure to doubtful loans represented 4% of the Group's exposure to this sector and stage 3 provisions accounted EUR 317 million at 31 December 2020;
- the non-food distribution sector (excluding e-commerce):

  At 31 December 2020, this sector represented EUR 12.2 billion (0.7% of the Group's total gross balance sheet and off-balance sheet commitments), with the impact of the lockdowns and restrictions put in place (administrative closures, *etc.*) varying according to the products, region and size of the players. Nearly 55% of counterparties have an Investment Grade rating and 4.8% of outstandings are classified as doubtful. At 31 December 2020, provisions for stage 3 amounted to EUR 311 million.
- the commercial real estate sector:

  The commercial real estate sector comprises a set of sub-segments with very different dynamics depending on the destination of the asset (logistics, office properties, accommodation and tourism, shopping centre, *etc.*) and the nature of the owner (institutional or specialist investor, industrial, promoter, *etc.*). At 31 December 2020, the gross exposure to the commercial real estate sector is EUR 71.1 billion (*i.e.* 3.9% of the Group's total gross on- and off-balance sheet commitments), mainly in Europe. This exposure is highly diversified between the various market segments, countries and entities of the Group. Furthermore, 44% of the commercial real estate counterparties have an Investment Grade rating. Doubtful loans represented 2.3% of the sector's total gross exposure. The segments most impacted by the health crisis are shopping centres (14% of the commercial real estate portfolio) and the hotels (6% of the commercial real estate portfolio) and are closely monitored. Stage 3 provisions represented EUR 462 million at 31 December 2020.

The Group remains diversified. No sector makes up more than 10% of total corporate lending or more than 4% of total lending at 31 December 2020.

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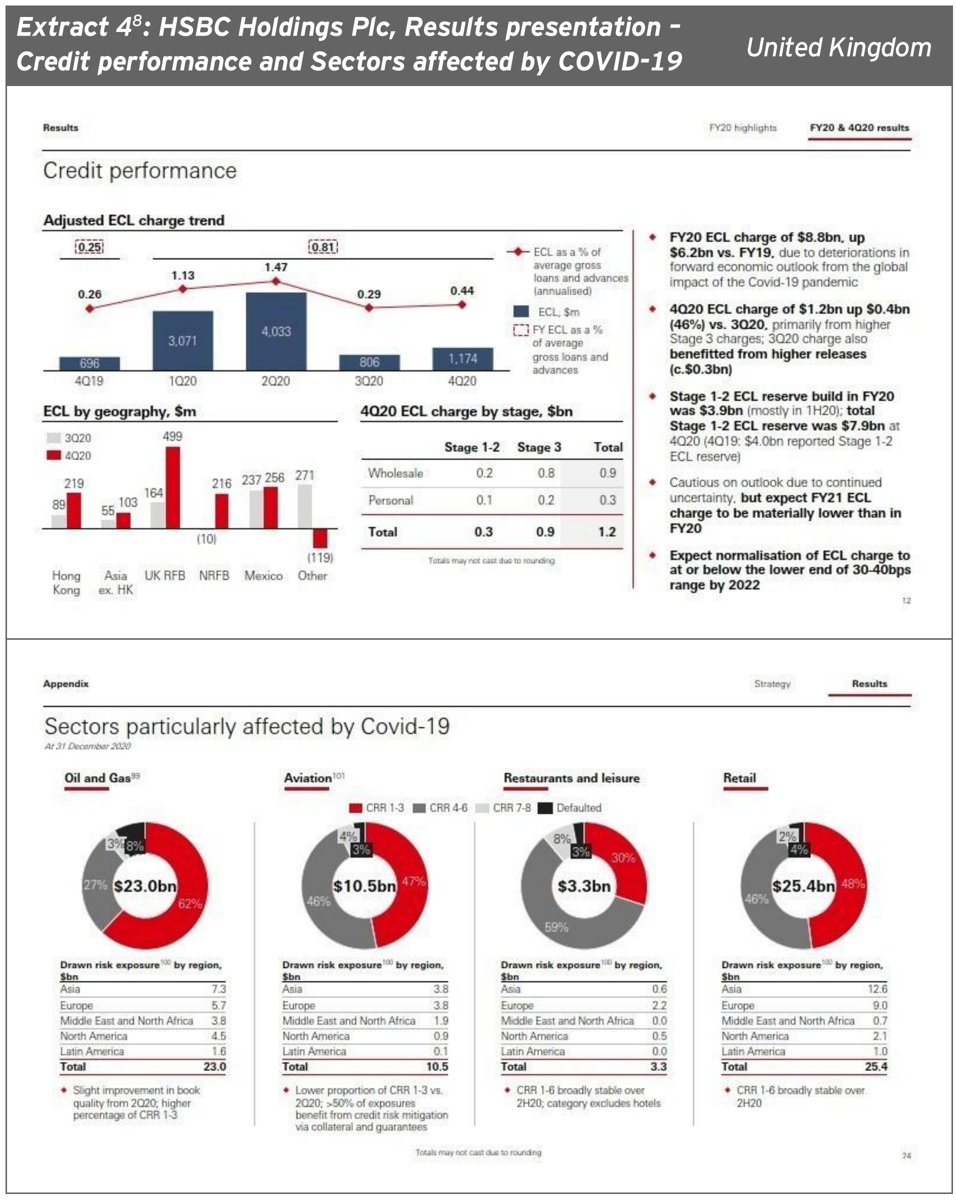
[7] *BNP Paribas, 2020 Universal registration document and annual financial report*, Risks and Capital adequacy – Pillar 3, Credit risk, page 360.

HSBC Holdings Plc ("HSBC") provided a graphical evolution of its ECL charge trend by quarter and provided a comparative analysis by geography and by stage for personal and wholesale loans in its 2020 results presentation to analysts. HSBC has further provided a snapshot of sectors particularly affected by COVID-19 by sector, geography and internal rating band.

***Extract 4[8]: HSBC Holdings Plc, Results presentation – Credit performance and Sectors affected by COVID-19*** *United Kingdom*



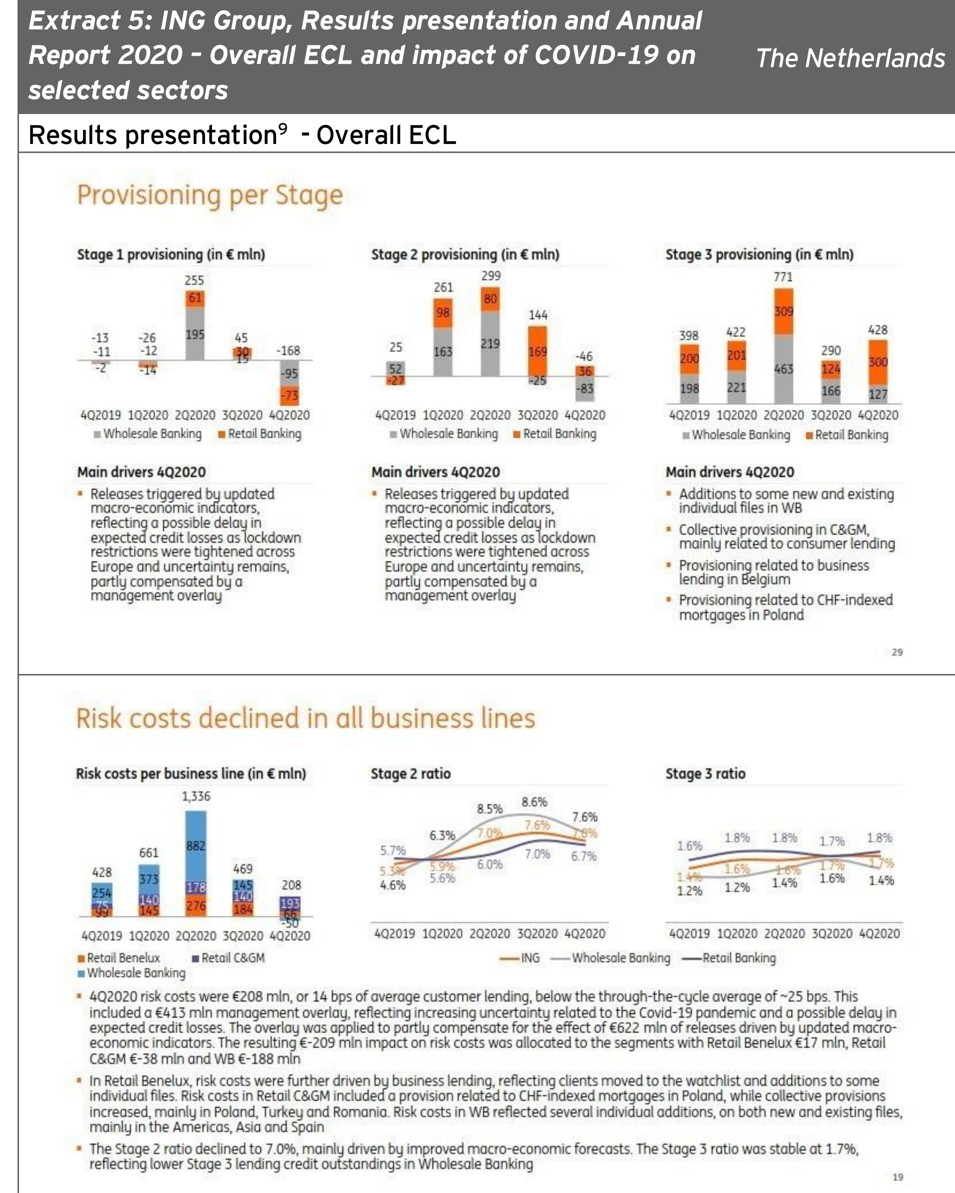

[8] *HSBC Holdings plc, 4Q20 Results*, Presentation to investors and analysts, pages 12 and 74.

In its 2020 full results presentation, ING Group ("ING") presented graphics of the quarterly evolution of its ECL allowance by stage and a similar evolution analysis of its cost of risk by business line, as well as its Stage 2 and Stage 3 ECL allowance evolution by product.

In its annual report for 2020, ING presented additional information in respect of the impact of COVID-19 on the overall ECL allowance and the impact on specific sectors respectively.

| ***Extract 5: ING Group, Results presentation and Annual Report 2020 – Overall ECL and impact of COVID-19 on selected sectors*** | *The Netherlands* |
| --- | --- |

**Results presentation[9] - Overall ECL**




[9] *ING Group, Full results 2020 presentation*, pages 19 and 29.

## Annual report[10] – Overall ECL and impact of COVID-19 on selected sectors

**Changes in gross carrying amounts and loan loss provisions (*)**

The table below provides a reconciliation by stage of the gross carrying/nominal amount and allowances for loans and advances to banks and customers, including loan commitments and financial guarantees. The transfers of financial instruments represent the impact of stage transfers upon the gross carrying/nominal amount and associated allowance for ECL. This includes the net-remeasurement of ECL arising from stage transfers, for example, moving from a 12-month (stage 1) to a lifetime (stage 2) ECL measurement basis.

The net remeasurement line represents the changes in provisions for facilities that remain in the same stage.

Please note the following comments with respect to the movements observed in the table below:

- Stage 3 gross carrying amount increased by €2.4 billion from €11.0 billion as per 31 December 2019 mainly as a result of ING's introduction of a new definition of default (€1.0 billion) and due to developments with respect to certain large individual files in the first half of 2020. For further background on implementation of the new definition of default, please refer to section 1.6 of the Consolidated Financial Statements;
- Stage 2 gross carrying amount increased by €20.9 billion from €41.1 billion as per 31 December 2019. This is mainly caused by the Watch List trigger (€10.2 billion) and the forbearance trigger (€9.5 billion) and to a lesser extent to other triggers such as 30 Days Past Due and the significant lifetime PD trigger, primarily in Wholesale Banking and Retail Market Leaders;

- Transportation & Logistics, Services, Real Estate and Food, Beverages & Personal Care were the sectors particularly impacted by the Covid-19 pandemic, with an increase in stage 2 amounts of €4.5 billion, €3.7 billion, €3.7 billion and €2.2 billion respectively. These sectors represent 10%, 11%, 10% and 9% of the total stage 2 gross carrying amounts respectively;
- The net re-measurement of loan loss provisions in stage 1 and stage 2 of €109 million and €450 million respectively and the transfer into lifetime ECL not credit impaired of €651 million were significantly impacted by the worsened macroeconomic outlook, including management adjustments of €269 million to reflect the risks in payment holidays and the impact of oil price decrease on the upstream Reserve Based Lending book in the US and €394m overlays to address for the delay in observed defaults as a result of the Government support measures.

Changes in gross carrying amounts and loan loss provisions (*)[1,2,3]

| in EUR million | 12-month ECL (Stage 1) | | Lifetime ECL not credit impaired (Stage 2) | | Lifetime ECL credit impaired (Stage 3) | | Total | |
|---|---|---|---|---|---|---|---|---|
| 2020 | Gross carrying amount | Provisions | Gross carrying amount | Provisions | Gross carrying amount | Provisions | Gross carrying amount | Provisions |
| Opening balance | **817,247** | **490** | **41,082** | **881** | **10,955** | **3,275** | **869,284** | **4,646** |
| Transfer into 12-month ECL (Stage 1) | 9,139 | 24 | -8,899 | -200 | -240 | -18 | 0 | -194 |
| Transfer into lifetime ECL not credit impaired (Stage 2) | -39,093 | -76 | 39,601 | 651 | -509 | -57 | 0 | 518 |
| Transfer into lifetime ECL credit impaired (Stage 3) | -3,592 | -30 | -1,879 | -163 | 5,471 | 1,518 | 0 | 1,325 |
| Net remeasurement of loan loss provisions | | 109 | | 450 | | 700 | | 1,259 |
| New financial assets originated or purchased | 161,333 | 178 | | | | | 161,333 | 178 |
| Financial assets that have been derecognised | -116,035 | -85 | -6,987 | -107 | -897 | -236 | -123,919 | -428 |
| Net drawdowns and repayments | 12,563 | | -938 | | -181 | | 11,444 | |
| Changes in models/risk parameters | | | | 7 | | | | 7 |
| **Increase in loan loss provisions** | | **119** | | **638** | | **1,908** | | **2,666** |
| Write-offs | | | | | -1,200 | -1,200 | -1,200 | -1,200 |
| Recoveries of amounts previously written off | | | | | | 39 | | 39 |
| Foreign exchange and other movements | | -28 | | -42 | | -226 | | -297 |
| **Closing balance** | **841,562** | **581** | **61,981** | **1,476** | **13,398** | **3,797** | **916,942** | **5,854** |

1 At the end of December 2020, the gross carrying amounts included loans and advances to central banks (€109.2 billion), loans and advances to banks (€25.4 billion), financial assets at FVOCI (€34.0 billion), securities at amortised cost (€50.6 billion), loans and advances to customers (€604.0 billion) and contingent liabilities (credit replacements) in scope of IFRS 9 (€118.4 billion) and excludes receivables related to securities in reverse repurchase transaction (€-6.4 billion), cash collateral in respect of derivatives (€-8.3 billion), the value adjustment hedged items (€-5.2 billion), a receivable that is offset by a liquidity facility (€-2.2 billion), on-demand bank balances (€-2.2 billion) and other differences amounting to €-0.3 billion.
2 Stage 3 Lifetime credit impaired includes €3 million Purchased or Originated Credit Impaired.
3 At the end of December 2020, the stock of provisions included provisions for loans and advances to central banks (€3 million), loans and advances to banks (€23 million), financial assets at FVOCI (€14 million), securities at amortised cost (€17 million), provisions for loans and advances to customers (€ 5,779 million) and provisions for contingent liabilities (credit replacements) recorded under Provisions (€17 million).

**Covid-19 sensitive sectors (*)**

**Aviation (Transportation & Logistics):** exposure amounted to €4.6 billion outstanding (0.52% of total portfolio). In terms of rating, the distribution of outstanding worsened compared to 2019, with main concentration shifting from BBB to BB and B rating classes. Substandard grade outstanding increased to 1.2% from 0% of Aviation portfolio, whereas the non-performing grade increased to 4.5% from 0%.

**Hospitality & Leisure (Services and Food, Beverages & Personal Care):** exposure amounted to €5.9 billion outstanding (0.67% of total portfolio). Rating distribution worsened compared to 2019, with outstanding shifting from BBB and BB ratings into B, CCC and CC rating classes. Substandard grade increased to 9.7% from 1.8%, whereas the NPL grade increased to 6.2% from 2.5%.

**Non-food retail (Retail):** exposure slightly reduced and amounted to €10.8 billion (1.22% of total portfolio). Rating distribution remained relatively stable, with concentration reducing in BBB, BB and B ratings and slightly increasing in A rating class. Substandard grade decreased to 0.7% from 0.9%, while NPL grade increased to 3.3% from 3.2%.

10 *ING Group, Annual Report 2020,* Risk Management, Credit Risk, pages 108-109 and 134-136. The bank presented comparatives for 2019 which have not been included in this illustrative extract.

In its 2020 annual report, NatWest Group plc ("NatWest") provided disclosures of the gross loans and ECL by segment and stage including coverage, ECL charge and annualised loss rates (cost of risk), with explanatory notes including the impact of COVID-19 on the overall ECL allowance. NatWest also provided disclosures showing gross loans and ECL allowance by days past due, by segment and stage (amounts and coverage ratios) and commentary on the impact of COVID-19-related customer support measures.

Disclosures are provided for key wholesale sectors that continue to be affected by COVID-19. For the purposes of this disclosure, exposures include FVOCI and off-balance sheet amounts.

***Extract 6[11]: NatWest Group, Annual Report and Accounts 2020 – Credit risk disclosures, impact of COVID-19 on ECL*** *United Kingdom*

Overall ECL disclosures[12]

**Credit risk – Banking activities** continued
**Portfolio summary – segment analysis**

The table below shows gross loans and ECL, by segment and stage, within the scope of the IFRS 9 ECL framework.

| 2020 | Retail Banking £m | Ulster Bank RoI £m | Commercial Banking £m | Private Banking £m | RBS International £m | NatWest Markets £m | Central items & other £m | Total £m |
|---|---|---|---|---|---|---|---|---|
| Loans - amortised cost and FVOCI | | | | | | | | |
| Stage 1 | 139,956 | 14,380 | 70,685 | 15,321 | 12,143 | 7,780 | 26,859 | 287,124 |
| Stage 2 | 32,414 | 3,302 | 37,344 | 1,939 | 2,242 | 1,566 | 110 | 78,917 |
| Stage 3 | 1,891 | 1,236 | 2,551 | 298 | 211 | 171 | — | 6,358 |
| *Of which: individual* | *—* | *43* | *1,578* | *298* | *211* | *162* | *—* | *2,292* |
| *Of which: collective* | *1,891* | *1,193* | *973* | *—* | *—* | *9* | *—* | *4,066* |
| | 174,261 | 18,918 | 110,580 | 17,558 | 14,596 | 9,517 | 26,969 | 372,399 |
| ECL provisions (1) | | | | | | | | |
| Stage 1 | 134 | 45 | 270 | 31 | 14 | 12 | 13 | 519 |
| Stage 2 | 897 | 265 | 1,713 | 68 | 74 | 49 | 15 | 3,081 |
| Stage 3 | 806 | 492 | 1,069 | 39 | 48 | 132 | — | 2,586 |
| *Of which: individual* | *—* | *13* | *607* | *39* | *48* | *124* | *—* | *831* |
| *Of which: collective* | *806* | *479* | *462* | *—* | *—* | *8* | *—* | *1,755* |
| | 1,837 | 802 | 3,052 | 138 | 136 | 193 | 28 | 6,186 |
| ECL provisions coverage (2,3) | | | | | | | | |
| Stage 1 (%) | 0.10 | 0.31 | 0.38 | 0.20 | 0.12 | 0.15 | 0.05 | 0.18 |
| Stage 2 (%) | 2.77 | 8.03 | 4.59 | 3.51 | 3.30 | 3.13 | 13.64 | 3.90 |
| Stage 3 (%) | 42.62 | 39.81 | 41.91 | 13.09 | 22.75 | 77.19 | — | 40.67 |
| | 1.05 | 4.24 | 2.76 | 0.79 | 0.93 | 2.03 | 0.10 | 1.66 |
| Impairment losses | | | | | | | | |
| ECL charge (4) | 792 | 250 | 1,927 | 100 | 107 | 40 | 26 | 3,242 |
| Stage 1 | (36) | (68) | (58) | 25 | 8 | (2) | 10 | (121) |
| Stage 2 | 619 | 261 | 1,667 | 60 | 71 | 54 | 15 | 2,747 |
| Stage 3 | 209 | 57 | 318 | 15 | 28 | (12) | 1 | 616 |
| *Of which: individual* | *—* | *(12)* | *166* | *15* | *28* | *(3)* | *—* | *194* |
| *Of which: collective* | *209* | *69* | *152* | *—* | *—* | *(9)* | *1* | *422* |
| ECL loss rate - annualised (basis points) (3) | 45 | 132 | 174 | 57 | 73 | 42 | 10 | 87 |
| Amounts written-off | 378 | 219 | 321 | 5 | 3 | 11 | — | 937 |
| *Of which: individual* | *—* | *—* | *172* | *5* | *3* | *11* | *—* | *191* |
| *Of which: collective* | *378* | *219* | *149* | *—* | *—* | *—* | *—* | *746* |

For the notes to this table refer to the following page.

Notes:
(1) Includes £6 million (2019 – £4 million) related to assets classified as FVOCI.
(2) ECL provisions coverage is calculated as ECL provisions divided by loans – amortised cost and FVOCI.
(3) ECL provisions coverage and ECL loss rates are calculated on third party loans and related ECL provisions and charge respectively. ECL loss rate is calculated as annualised third party ECL charge divided by loans – amortised cost and FVOCI.
(4) Includes a £12 million charge (2019 – £2 million) related to other financial assets, of which £2 million (2019 – £1 million release) related to assets classified as FVOCI; and £28 million (2019 – nil) related to contingent liabilities.
(5) The table shows gross loans only and excludes amounts that are outside the scope of the ECL framework. Refer to the Financial instruments within the scope of the IFRS 9 ECL framework section for further details. Other financial assets within the scope of the IFRS 9 ECL framework were cash and balances at central banks totalling £122.7 billion (2019 – £79.2 billion) and debt securities of £53.8 billion (2019 – £59.4 billion).

Key points

- The ECL requirement increased significantly year-on-year, primarily in Stage 1 and Stage 2, in expectation of credit deterioration reflecting the severity of the economic impact arising from COVID-19. The deteriorated economic outlook also resulted in a significant migration of exposures from Stage 1 to Stage 2, consequently moving from a 12 month to a life-time ECL requirement.
- The various customer support mechanisms continued to mitigate against flows to default during the year. Hence, there was a more limited impact on Stage 3 ECL requirements which reduced slightly year-on-year reflecting the lower Stage 3 stock of exposures, driven by the sale of legacy non-performing mortgages in Ulster Bank RoI.
- Reflecting the continued high level of uncertainty arising from COVID-19, management judged that certain ECL post model adjustments were necessary. Refer to the Governance and post model adjustments section for further detail.
- Reflective of the economic environment, the annualised loss rate was elevated and significantly above the previously advised view of NatWest Group's normalised blended long-term loss rate of 30 to 40 basis points.
- Business level commentary is provided in the Segmental loans and impairment metrics section.

[11] *NatWest Group plc, Annual Report and Accounts 2020*, Capital and risk management: Credit risk - Banking activities, pages 181-182 and 184-185 and 190.
[12] The bank presented comparatives for 2019 which have not been included in this illustrative extract.

**Credit risk – Banking activities** continued

**Segmental loans and impairment metrics**

The table below shows gross loans and ECL provisions, by days past due, by segment and stage, within the scope of the ECL framework.

| | Gross loans | | | | | | | ECL provisions (2) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Stage 2 (1) | | | | | | | Stage 2 (1) | | | | | |
| 2020 | Stage 1 £m | Not past due £m | 1-30 DPD £m | >30 DPD £m | Total £m | Stage 3 £m | Total £m | Stage 1 £m | Not past due £m | 1-30 DPD £m | >30 DPD £m | Total £m | Stage 3 £m | Total £m |
| Retail Banking | 139,956 | 30,714 | 1,080 | 620 | 32,414 | 1,891 | 174,261 | 134 | 762 | 70 | 65 | 897 | 806 | 1,837 |
| Ulster Bank RoI | 14,380 | 2,964 | 144 | 194 | 3,302 | 1,236 | 18,918 | 45 | 227 | 15 | 23 | 265 | 492 | 802 |
| *Personal* | *11,117* | *1,500* | *115* | *130* | *1,745* | *1,064* | *13,926* | *27* | *74* | *9* | *13* | *96* | *392* | *515* |
| *Wholesale* | *3,263* | *1,464* | *29* | *64* | *1,557* | *172* | *4,992* | *18* | *153* | *6* | *10* | *169* | *100* | *287* |
| Commercial Banking | 70,685 | 36,451 | 589 | 304 | 37,344 | 2,551 | 110,580 | 270 | 1,648 | 44 | 21 | 1,713 | 1,069 | 3,052 |
| Private Banking | 15,321 | 1,908 | 17 | 14 | 1,939 | 298 | 17,558 | 31 | 67 | — | 1 | 68 | 39 | 138 |
| *Personal* | *12,799* | *116* | *17* | *11* | *144* | *263* | *13,206* | *7* | *2* | — | — | *2* | *19* | *28* |
| *Wholesale* | *2,522* | *1,792* | — | *3* | *1,795* | *35* | *4,352* | *24* | *65* | — | *1* | *66* | *20* | *110* |
| RBS International | 12,143 | 2,176 | 46 | 20 | 2,242 | 211 | 14,596 | 14 | 72 | 1 | 1 | 74 | 48 | 136 |
| *Personal* | *2,676* | *18* | *17* | *14* | *49* | *70* | *2,795* | *3* | *1* | — | — | *1* | *11* | *15* |
| *Wholesale* | *9,467* | *2,158* | *29* | *6* | *2,193* | *141* | *11,801* | *11* | *71* | *1* | *1* | *73* | *37* | *121* |
| NatWest Markets | 7,780 | 1,457 | — | 109 | 1,566 | 171 | 9,517 | 12 | 49 | — | — | 49 | 132 | 193 |
| Central items & other | 26,859 | 110 | — | — | 110 | — | 26,969 | 13 | 15 | — | — | 15 | — | 28 |
| Total loans | 287,124 | 75,780 | 1,876 | 1,261 | 78,917 | 6,358 | 372,399 | 519 | 2,840 | 130 | 111 | 3,081 | 2,586 | 6,186 |
| Of which: | | | | | | | | | | | | | | |
| *Personal* | *166,548* | *32,348* | *1,229* | *775* | *34,352* | *3,288* | *204,188* | *171* | *839* | *79* | *78* | *996* | *1,228* | *2,395* |
| *Wholesale* | *120,576* | *43,432* | *647* | *486* | *44,565* | *3,070* | *168,211* | *348* | *2,001* | *51* | *33* | *2,085* | *1,358* | *3,791* |

**Credit risk – Banking activities** continued

**Segmental loans and impairment metrics**

The table below shows ECL and ECL provisions coverage, by days past due, by segment and stage, within the scope of the ECL framework.

| | ECL provisions coverage | | | | | | | ECL | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Stage 2 (1,2) | | | | | | | | |
| 2020 | Stage 1 % | Not past due % | 1-30 DPD % | >30 DPD % | Total % | Stage 3 % | Total % | Total charge £m | Loss rate basis points | Amounts written-off £m |
| Retail Banking | 0.10 | 2.48 | 6.48 | 10.48 | 2.77 | 42.62 | 1.05 | 792 | 45 | 378 |
| Ulster Bank RoI | 0.31 | 7.66 | 10.42 | 11.86 | 8.03 | 39.81 | 4.24 | 250 | 132 | 219 |
| *Personal* | *0.24* | *4.93* | *7.83* | *10.00* | *5.50* | *36.84* | *3.70* | *106* | *76* | *212* |
| *Wholesale* | *0.55* | *10.45* | *20.69* | *15.63* | *10.85* | *58.14* | *5.75* | *144* | *288* | *7* |
| Commercial Banking | 0.38 | 4.52 | 7.47 | 6.91 | 4.59 | 41.91 | 2.76 | 1,927 | 174 | 321 |
| Private Banking | 0.20 | 3.51 | — | 7.14 | 3.51 | 13.09 | 0.79 | 100 | 57 | 5 |
| *Personal* | *0.05* | *1.72* | — | — | *1.39* | *7.22* | *0.21* | *(5)* | *(4)* | *1* |
| *Wholesale* | *0.95* | *3.63* | — | *33.33* | *3.68* | *57.14* | *2.53* | *105* | *241* | *4* |
| RBS International | 0.12 | 3.31 | 2.17 | 5.00 | 3.30 | 22.75 | 0.93 | 107 | 73 | 3 |
| *Personal* | *0.11* | *5.56* | — | — | *2.04* | *15.71* | *0.54* | *4* | *14* | *3* |
| *Wholesale* | *0.12* | *3.29* | *3.45* | *16.67* | *3.33* | *26.24* | *1.03* | *103* | *87* | — |
| NatWest Markets | 0.15 | 3.36 | — | — | 3.13 | 77.19 | 2.03 | 40 | 42 | 11 |
| Central items & other | 0.05 | 13.64 | — | — | 13.64 | — | 0.10 | 26 | 10 | — |
| Total loans | 0.18 | 3.75 | 6.93 | 8.80 | 3.90 | 40.67 | 1.66 | 3,242 | 87 | 937 |
| Of which: | | | | | | | | | | |
| *Personal* | *0.10* | *2.59* | *6.43* | *10.06* | *2.90* | *37.35* | *1.17* | *897* | *44* | *594* |
| *Wholesale* | *0.29* | *4.61* | *7.88* | *6.79* | *4.68* | *44.23* | *2.25* | *2,345* | *139* | *343* |

Key points

- Retail Banking – Balance sheet growth was primarily due to mortgages. This reflected strong customer demand as well as the £3.0 billion acquisition of an owner-occupied mortgage portfolio from Metro Bank (for which a Stage 1 ECL charge of £9 million was incurred on acquisition).
- Unsecured lending balances decreased reflecting reduced customer demand and the pay down of existing borrowing as well as a more restrictive risk appetite reflective of the uncertain external environment. The deteriorated economic outlook, including forecast increases in unemployment, resulted in increased account level IFRS 9 PDs. Consequently, compared to 2019, a larger proportion of customer accounts exhibited a significant increase in credit risk (SICR) which caused a migration of assets from Stage 1 to Stage 2. As a result, the ECL requirement increased.
- While the granting of a COVID-19 related payment holiday did not automatically trigger a migration to Stage 2, a subset of customers who had accessed payment holiday support, and where their risk profile was identified as relatively high risk, were collectively migrated to Stage 2 and their ECL uplifted (refer to the Governance and post model adjustments section for further details). The various COVID-19 related customer support mechanisms (loan repayment holidays, government job retention scheme) continued to mask actual portfolio deterioration in the short-term, with the days past due, and flows to Stage 3 metrics, yet to be impacted. Provisions coverage increased overall. However, coverage in Stage 2 alone reduced, mainly due to a proportionately higher share of mortgage exposures where coverage levels were lower. This reflected the secured nature of the borrowing. The loss rate was significantly higher than in the prior year.
- Ulster Bank RoI – Balances remained broadly flat year-on-year. Further drawdowns on existing facilities and new lending across both the Wholesale and Personal portfolios were offset by ongoing reduction of the non-performing mortgage portfolio through the execution of a portfolio sale agreed in 2019. The deteriorated economic outlook included forecast increases in unemployment, reductions in property prices and GDP, which resulted in increased IFRS 9 PDs across all portfolios. Consequently, compared to 2019, a larger proportion of the exposures exhibited a SICR with an associated migration of assets from Stage 1 to Stage 2. As a result, the ECL increased. The various COVID-19 related customer support mechanisms (for example, loan payment breaks, government job retention scheme) masked actual portfolio deterioration in the short-term, with the days past due, and flows to Stage 3, yet to be materially affected. The loss rate was significantly higher than in the prior year.
- Commercial Banking – Balance sheet growth was primarily due to further drawdowns on existing facilities and new lending under the COVID-19 government lending schemes. The deteriorated economic outlook, including significant reductions in GDP and commercial real estate valuations, resulted in increased IFRS 9 PDs. Consequently, compared to 2019, a larger proportion of the exposures exhibited a SICR which caused a migration of assets from Stage 1 to Stage 2. As a result, the ECL requirement increased. Reflecting the continued high level of uncertainty arising from COVID-19, management judged that certain ECL post model adjustments were necessary, refer to the Governance and post model adjustments section for further details. The increase in Stage 2 assets due to PD deterioration was also the primary driver of the increase in the Stage 2 exposures less than 30 days past due. A small number of large cases resulted in the increase in the 1-30 DPD category. The various COVID-19 related customer support mechanisms mitigated against flows into default in the short-term. Increased coverage in Stage 1 and Stage 2 was mainly due to the increased ECL, primarily as a result of the deteriorated economic outlook, which was partially offset by a decrease in Stage 3 coverage driven by a small number of individual cases with low ECL. The loss rate was significantly higher than in the prior year.
- Other businesses – The drivers of the increased ECL requirement were similar to those described above.

## Impact of COVID-19 on selected sectors

**Credit risk – Banking activities** continued

**Sector analysis**

The table below shows ECL by stage, for the Personal portfolios and key sectors of the Wholesale portfolios, that continue to be affected by COVID-19.

| | Loans - amortised cost and FVOCI | | | | Off-balance sheet | | ECL provisions | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | Stage 1 £m | Stage 2 £m | Stage 3 £m | Total £m | Loan commitments (1) £m | Contingent liabilities £m | Stage 1 £m | Stage 2 £m | Stage 3 £m | Total £m |
| Personal | 166,548 | 34,352 | 3,288 | 204,188 | 38,960 | 45 | 171 | 996 | 1,228 | 2,395 |
| Mortgages | 158,387 | 29,571 | 2,558 | 190,516 | 14,554 | 3 | 51 | 319 | 635 | 1,005 |
| Credit cards | 2,411 | 1,375 | 109 | 3,895 | 14,262 | — | 53 | 225 | 76 | 354 |
| Other personal | 5,750 | 3,406 | 621 | 9,777 | 10,144 | 42 | 67 | 452 | 517 | 1,036 |
| Wholesale | 120,576 | 44,565 | 3,070 | 168,211 | 89,845 | 4,785 | 348 | 2,085 | 1,358 | 3,791 |
| Property | 23,733 | 13,021 | 1,322 | 38,076 | 16,829 | 568 | 123 | 507 | 545 | 1,175 |
| Financial institutions | 44,002 | 3,624 | 17 | 47,643 | 15,935 | 1,076 | 23 | 90 | 8 | 121 |
| Sovereign | 4,751 | 204 | 4 | 4,959 | 1,585 | 2 | 14 | 1 | 2 | 17 |
| Corporate | 48,090 | 27,716 | 1,727 | 77,533 | 55,496 | 3,139 | 188 | 1,487 | 803 | 2,478 |
| *Of which:* | | | | | | | | | | |
| *Airlines and aerospace* | *753* | *1,213* | *41* | *2,007* | *1,888* | *215* | *2* | *42* | *25* | *69* |
| *Automotive* | *4,383* | *1,759* | *161* | *6,303* | *4,205* | *102* | *17* | *63* | *17* | *97* |
| *Education* | *821* | *754* | *63* | *1,638* | *1,016* | *16* | *2* | *41* | *17* | *60* |
| *Health* | *2,694* | *2,984* | *131* | *5,809* | *616* | *14* | *13* | *164* | *48* | *225* |
| *Land transport and logistics* | *2,868* | *1,823* | *111* | *4,802* | *3,782* | *197* | *8* | *98* | *32* | *138* |
| *Leisure* | *3,299* | *6,135* | *385* | *9,819* | *2,199* | *125* | *22* | *439* | *204* | *665* |
| *Oil and gas* | *1,178* | *300* | *83* | *1,561* | *2,225* | *346* | *4* | *20* | *59* | *83* |
| *Retail* | *6,702* | *2,282* | *187* | *9,171* | *5,888* | *512* | *18* | *112* | *101* | *231* |
| Total | 287,124 | 78,917 | 6,358 | 372,399 | 128,805 | 4,830 | 519 | 3,081 | 2,586 | 6,186 |

In its 2020 results presentation, Standard Chartered presented graphics showing the impact of loans and advances in vulnerable sectors by stage, as well as the impact of relief measures, showing the evolution for the fourth quarter of 2020, by region.

In its 2020 annual report, Standard Chartered provided a number of tables and qualitative information in respect of vulnerable sectors showing maximum on and off-balance sheet exposures and analysis of exposures and ECL analysis by sector by stage.

***Extract 7: Standard Chartered, Results presentation and Annual Report 2020 – Impact of COVID-19 on vulnerable sectors and relief measures*** *United Kingdom*

**Results presentation[13] – Vulnerable sectors and COVID-19 relief measures**

**We continue to monitor sectors most at risk from COVID-19**

Loans & Advances in 'vulnerable sectors'[1] fell by $3.3bn during 4Q'20

| IFRS 9 (as at 31 December 2020) | Commodity Traders | Oil and Gas | Metals & Mining | Aviation[3] |
|---|---|---|---|---|
| % < 1 year maturity[3] | 91% | 56% | 71% | 24% |
| Net Stage 3 L&A ($bn) | 0.1 | 0.1 | 0.1 | 0.2 |
| Net Stage 2 L&A ($bn) | 0.5 | 1.5 | 0.7 | 1.5 |
| Net Stage 1 L&A ($bn) | 8.1 | 5.6 | 3.1 | 2.1 |
| Total | 8.7 | 7.2 | 3.9 | 3.8 |
| Change in total Net L&A from 30.09.20 ($bn) | (0.1) | (1.5) | (1.1) | (0.5) |
| % in Early Alert (NPP)[2] | 2% | 4% | 5% | 47% |

Gross L&A by credit grade (%): CG 1A – 11C (Strong / Satisfactory); CG 12 (Higher risk); Defaulted

- Vulnerable sectors
  - 7% of Group L&A
  - Off balance sheet exposure 13% of Group, stable QoQ
  - ECL provision down $0.1bn QoQ
- Other sectors considered sensitive
  - Commercial Real Estate
    - $19.1bn Net L&A, up $0.9bn
    - 98% strong/satisfactory credit grade
  - Hotels & Tourism
    - $2.6bn Net L&A, down $0.1bn
    - 90% strong/satisfactory

36 Footnotes on pages 59-64; Glossary on pages 65-66

**Annual report[14] – Vulnerable sector tables**

**Vulnerable sector tables**

Vulnerable sectors are those that the Group considers to be most at risk from COVID-19 and lower oil prices, and we continue to monitor exposures to these sectors particularly carefully.

Total net exposure to vulnerable sectors reduced by $6 billion compared with 31 December 2019 and represents 27 per cent (2019: 30 per cent) of the total net exposure in Corporate & Institutional Banking and Commercial Banking. The reductions were largely due to increased levels of collateral and reduced undrawn commitments, particularly in the Commodity traders, Metals & mining, and Commercial real estate sectors.

Stage 2 loans increased to 18 per cent (2019: 13 per cent) of loans to vulnerable sectors. This was primarily driven by an increase in loans placed on non-purely precautionary early alert in the Aviation and Commercial real estate sectors, offset by Commodity traders sector clients, some of which were transferred to stage 3.

Stage 3 loans increased by $0.6 billion compared with 31 December 2019 primarily due to downgrades from stage 2 exposures in the Commodity traders and Aviation sectors due to COVID-19 related volatility.

**Loans and advances by stage**

| | 2020 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Stage 1 | | | Stage 2 | | | Stage 3 | | | Total | | |
| Amortised cost | Gross balance $million | Total credit impair-ment $million | Net carrying amount $million | Gross balance $million | Total credit impair-ment $million | Net carrying amount $million | Gross balance $million | Total credit impair-ment $million | Net carrying amount $million | Gross balance $million | Total credit impair-ment $million | Net carrying amount $million |
| **Industry:** | | | | | | | | | | | | |
| Aviation | 2,073 | (1) | 2,072 | 1,613 | (26) | 1,587 | 258 | (78) | 180 | 3,944 | (105) | 3,839 |
| Commodity traders | 8,067 | (3) | 8,064 | 473 | (12) | 461 | 799 | (660) | 139 | 9,339 | (675) | 8,664 |
| Metals & mining | 3,128 | (3) | 3,125 | 677 | (18) | 659 | 210 | (112) | 98 | 4,015 | (133) | 3,882 |
| Commercial real estate | 15,847 | (13) | 15,834 | 3,068 | (34) | 3,034 | 408 | (186) | 222 | 19,323 | (233) | 19,090 |
| Hotels & tourism | 1,318 | (2) | 1,316 | 1,168 | (18) | 1,150 | 138 | (47) | 91 | 2,624 | (67) | 2,557 |
| Oil & gas | 5,650 | (7) | 5,643 | 1,548 | (69) | 1,479 | 276 | (199) | 77 | 7,474 | (275) | 7,199 |
| **Total** | 36,083 | (29) | 36,054 | 8,547 | (177) | 8,370 | 2,089 | (1,282) | 807 | 46,719 | (1,488) | 45,231 |
| **Total Corporate & Institutional Banking and Commercial Banking** | 110,993 | (95) | 110,898 | 20,004 | (487) | 19,517 | 7,652 | (4,610) | 3,042 | 138,649 | (5,192) | 133,457 |
| **Total Retail Banking, Private Banking and other segments** | 189,459 | (453) | 189,006 | 3,006 | (254) | 2,752 | 1,562 | (731) | 831 | 194,027 | (1,438) | 192,589 |
| **Total Group** | 300,452 | (548) | 299,904 | 23,010 | (741) | 22,269 | 9,214 | (5,341) | 3,873 | 332,676 | (6,630) | 326,046 |

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[13] *Standard Chartered, FY'20 and 4Q'20 Results and investor update 25 February 2021*, pages 36-37.

[14] *Standard Chartered Annual Report 2020*, Risk review, Risk profile, pages 220 – 221. The bank presented comparatives for 2019 which have not been included in this illustrative extract.

In its 2020 consolidated financial statements, UBS Group AG ("UBS") provided granular disclosures of gross carrying amounts and ECL allowance by stage and by product, as well as coverage ratios for the same product analysis followed by explanatory comments including the impact of COVID-19 on its coverage ratios.

### Extract 8[15]: UBS Group AG, Annual report 2020, Impact of COVID-19 on overall ECL — *Switzerland*

The tables below and on the following pages provide ECL exposure and ECL allowance and provision information about financial instruments and certain non-financial instruments that are subject to ECL.

| *USD million* | 31.12.20 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Carrying amount[1] | | | | ECL allowances | | | |
| Financial instruments measured at amortized cost | Total | Stage 1 | Stage 2 | Stage 3 | Total | Stage 1 | Stage 2 | Stage 3 |
| Cash and balances at central banks | 158,231 | 158,231 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loans and advances to banks | 15,444 | 15,260 | 184 | 0 | (16) | (9) | (5) | (1) |
| Receivables from securities financing transactions | 74,210 | 74,210 | 0 | 0 | (2) | (2) | 0 | 0 |
| Cash collateral receivables on derivative instruments | 32,737 | 32,737 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loans and advances to customers | 379,528 | 356,948 | 20,341 | 2,240 | (1,060) | (142) | (215) | (703) |
| *of which: Private clients with mortgages* | *148,175* | *138,769* | *8,448* | *959* | *(166)* | *(35)* | *(93)* | *(39)* |
| *of which: Real estate financing* | *43,429* | *37,568* | *5,838* | *23* | *(63)* | *(15)* | *(44)* | *(4)* |
| *of which: Large corporate clients* | *15,161* | *12,658* | *2,029* | *474* | *(279)* | *(27)* | *(40)* | *(212)* |
| *of which: SME clients* | *14,872* | *11,990* | *2,254* | *628* | *(310)* | *(19)* | *(23)* | *(268)* |
| *of which: Lombard* | *133,850* | *133,795* | *0* | *55* | *(36)* | *(5)* | *0* | *(31)* |
| *of which: Credit cards* | *1,558* | *1,198* | *330* | *30* | *(38)* | *(11)* | *(11)* | *(16)* |
| *of which: Commodity trade finance* | *3,269* | *3,214* | *43* | *12* | *(106)* | *(5)* | *0* | *(101)* |
| Other financial assets measured at amortized cost | 27,194 | 26,377 | 348 | 469 | (133) | (34) | (9) | (90) |
| *of which: Loans to financial advisors* | *2,569* | *1,982* | *137* | *450* | *(108)* | *(27)* | *(5)* | *(76)* |
| **Total financial assets measured at amortized cost** | 687,345 | 663,763 | 20,873 | 2,709 | (1,211) | (187) | (229) | (795) |
| **Financial assets measured at fair value through other comprehensive income** | 8,258 | 8,258 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total on-balance sheet financial assets in scope of ECL requirements** | 695,603 | 672,021 | 20,873 | 2,709 | (1,211) | (187) | (229) | (795) |

Coverage ratios are calculated for the core loan portfolio by taking ECL allowances and provisions divided by the gross carrying amount of the exposures. Core loan exposure is defined as the sum of *Loans and advances to customers* and *Loans to financial advisors*.

These ratios are influenced by the following key factors:

- lending in Switzerland includes government backed COVID-19 loans;
- Lombard loans are generally secured with marketable securities in portfolios that are, as a rule, highly diversified, with strict lending policies that are intended to ensure that credit risk is minimal under most circumstances;
- mortgage loans to private clients and real estate financing are controlled by conservative eligibility criteria, including low loan-to-value ratios and strong debt service capabilities; for example, more than 99% of the aggregated amount of Swiss residential mortgage loans would continue to be fully covered by real estate collateral even if the value of that collateral decreased by 20%, for a 30% reduction, more than 98% would be covered;
- the amount of unsecured retail lending (including credit cards) is insignificant;
- contractual maturities in the loan portfolio, which are a factor in the calculation of ECLs, are generally short, with a large part of the loan portfolio having contractual maturities of 12 months or less; and
- write-offs of ECL allowances against the gross loan balances when all or part of a financial asset is deemed uncollectible or forgiven, reduces the coverage ratios.

**Coverage ratios for core loan portfolio**

| | 31.12.20 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Gross carrying amount (USD million) | | | | ECL coverage (bps) | | | |
| On-balance sheet | Total | Stage 1 | Stage 2 | Stage 3 | Total | Stage 1 | Stage 2 | Stage 3 |
| Private clients with mortgages | 148,341 | 138,803 | 8,540 | 998 | 11 | 2 | 108 | 390 |
| Real estate financing | 43,492 | 37,583 | 5,883 | 27 | 15 | 4 | 75 | 1,414 |
| Large corporate clients | 15,440 | 12,684 | 2,069 | 686 | 181 | 21 | 192 | 3,089 |
| SME clients | 15,183 | 12,010 | 2,277 | 896 | 204 | 16 | 101 | 2,991 |
| Lombard | 133,886 | 133,800 | 0 | 86 | 3 | 0 | 0 | 3,592 |
| Credit cards | 1,596 | 1,209 | 342 | 46 | 240 | 91 | 333 | 3,488 |
| Commodity trade finance | 3,375 | 3,219 | 43 | 113 | 315 | 16 | 2 | 8,939 |
| Other loans and advances to customers | 19,274 | 17,781 | 1,402 | 91 | 31 | 14 | 25 | 3,563 |
| Loans to financial advisors | 2,677 | 2,009 | 142 | 526 | 404 | 135 | 351 | 1,446 |
| **Total**[1] | 383,266 | 359,099 | 20,697 | 3,470 | 30 | 5 | 106 | 2,247 |
| | Gross exposure (USD million) | | | | ECL coverage (bps) | | | |
| Off-balance sheet | Total | Stage 1 | Stage 2 | Stage 3 | Total | Stage 1 | Stage 2 | Stage 3 |
| Private clients with mortgages | 6,285 | 6,083 | 198 | 3 | 7 | 6 | 16 | 197 |
| Real estate financing | 7,056 | 6,576 | 481 | 0 | 21 | 9 | 185 | 0 |
| Large corporate clients | 32,828 | 25,026 | 7,598 | 205 | 46 | 27 | 92 | 565 |
| SME clients | 9,121 | 7,239 | 1,734 | 148 | 40 | 19 | 63 | 779 |
| Lombard | 14,178 | 14,170 | 0 | 8 | 2 | 1 | 0 | 1,941 |
| Credit cards | 8,661 | 8,220 | 430 | 11 | 9 | 8 | 44 | 0 |
| Commodity trade finance | 1,683 | 1,658 | 25 | 0 | 10 | 8 | 15 | 8,279 |
| Financial intermediaries and hedge funds | 7,690 | 7,242 | 448 | 0 | 26 | 13 | 248 | 166 |
| Other off-balance sheet commitments | 14,366 | 13,876 | 482 | 8 | 13 | 7 | 11 | 12,414 |
| **Total**[2] | 101,869 | 90,090 | 11,396 | 382 | 25 | 13 | 91 | 894 |

1 Includes Loans and advances to customers of USD 380,589 million and Loans to financial advisors of USD 2,677 million which are presented on the balance sheet line Other assets measured at amortized cost.
2 Excludes Forward starting reverse repurchase and securities borrowing agreements.

[15] *UBS Group AG, Annual Report 2020*, Consolidated financial statements, Note 9, pages 316 and 318. The bank presented comparatives for 2019 which have not been included in this illustrative extract.

*Payment holidays and customer support schemes*

In its 2020 results presentation, Barclays plc provided visualisations of the impact of payment holidays and other relief measures by product and segment as well as by type of scheme.

In its 2020 annual report, Barclays provided disclosures in respect of the impact of payment holidays and other relief measures in the narrative accompanying the tabular disclosures for home loans and credit cards, unsecured loans and other retail lending principle portfolios.

| ***Extract 9: Barclays PLC, Results presentation and Annual Report 2020 - Visualisations and narrative description of payment holidays and other support schemes*** | *United Kingdom* |
|---|---|

Results presentation[16] – Visualisations of payment holidays across portfolios

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[16] Barclays PLC, FY 2020 Results presentation, 18 February 2021, pages 3, 30-31.

## Support for businesses[1]

| | |
|---|---|
| Existing lending and withholding fees | • **£14bn three year lending fund for UK SMEs**<br>• **Over £50bn of lending limits** available to UK clients<br>• Free banking and overdraft fees waived for **650,000 UK SMEs**<br>• **12-month capital repayment holidays** for most loans over **£25,000** |
| Supporting the UK Government's initiatives | • **c.330,000 Government-backed Bounce Back loans approved** with a value of c.£10.4bn, **c.10,000 Coronavirus Business Interruption Loan Scheme (CBILS) loans** approved with a value of c.£2.5bn, and **c.120 Coronavirus Large Business Interruption Loan Scheme (CLBILS) loans** approved with a value of c.£0.8bn<br>• Central role in arranging **c.£13.6bn of commercial paper issuance for clients through the Covid Corporate Financing Facility (CCFF)**<br>• Sole relationship bank supporting the UK Government with the **Coronavirus Job Retention Scheme** distributions to furloughed workers and **Self-employment Income Support Scheme** |
| Helping business and institutions to access the global capital markets | • Led deals for **83 governments, government related clients and supranationals** around the world in Q220, Q320 and Q420, **raising £320bn**. This included deals for **16 European sovereigns, raising £85bn**<br>• **Underwrote c.£1.5tn of new issuance globally across equity and debt capital markets** in Q220, Q320 and Q420<br>• **ECM supported 22 companies** in the UK during Q220, Q320 and Q420 **to raise £10bn** |

31 | Barclays FY 2020 Results | 18 February 2021

### Annual report[17] – Impact of payment holidays on home loans, credit cards, unsecured loans and other retail lending

**Home loans principal portfolios – new lending**

| As at 31 December | Barclays UK 2020 | Barclays UK 2019 |
|---|---|---|
| New bookings (£m) | **22,776** | 25,530 |
| New home loan proportion above >90% LTV (%) | **2.6** | 4.2 |
| Average LTV on new home loans: balance weighted (%) | **67.5** | 67.9 |
| Average LTV on new home loans: valuation weighted (%)[a] | **59.6** | 59.8 |

**Note**

a 2019 numbers have been restated to factor in Wealth accounts to align with 2020 figures.

New bookings reduced by 10.8% with a decrease in new flows across both portfolios: 6.1% decrease in owner occupied and 34.8% decrease in the BTL portfolio. This decrease was driven by supply and demand effects of the COVID-19 pandemic. Demand was impacted by a significant shrinking of the market in Q2 although this was partially offset by a resurgent Q3 and Q4. High LTV supply was reduced by credit management actions.

During 2020, a total of 128,000 payment holidays were provided to customers. At 31 December 2020, the book value of the portfolio where payment holidays remain in place was £2.2bn, representing 1.5% of the portfolio.

**Head Office:** Italian home loans and advances at amortised cost reduced to £5.7bn (2019: £6.0bn) and continue to run-off since new bookings ceased in 2016. The portfolio is secured on residential property with an average balance weighted mark to market LTV of 62.1% (2019: 64.4%). 90-day arrears remained broadly stable at 1.7% (2019: 1.8%) and gross charge-off rate increased to 1.0% (2019: 0.8%). At 31 December 2020, the book value of the portfolio where payment holidays remain in place was £181.7m, representing 3.2% of the portfolio.

**Credit cards, unsecured loans and other retail lending**

The principal portfolios listed below accounted for 84% (2019: 87%) of the Group's total credit cards, unsecured loans and other retail lending.

**Credit cards, unsecured loans and other retail lending principal portfolios**

| | Gross loans and advances £m | 30-day arrears, excluding recovery book % | 90-day arrears, excluding recovery book % | Annualised gross write-off rate % | Annualised net write-off rate % |
|---|---|---|---|---|---|
| **As at 31 December 2020** | | | | | |
| **Barclays UK** | | | | | |
| UK cards | **11,911** | **1.7** | **0.8** | **2.9** | **2.9** |
| UK personal loans | **4,591** | **2.3** | **1.2** | **3.4** | **3.1** |
| Barclays Partner Finance[a] | **2,469** | **0.5** | **0.3** | **1.1** | **1.1** |
| **Barclays International** | | | | | |
| US cards | **16,845** | **2.5** | **1.4** | **5.6** | **5.6** |
| Germany consumer lending | **3,458** | **1.9** | **0.8** | **1.2** | **1.1** |
| **As at 31 December 2019** | | | | | |
| **Barclays UK** | | | | | |
| UK cards | 16,457 | 1.7 | 0.8 | 1.6 | 1.6 |
| UK personal loans | 6,139 | 2.1 | 1.0 | 3.2 | 2.9 |
| **Barclays International** | | | | | |
| US cards | 22,041 | 2.7 | 1.4 | 4.5 | 4.4 |
| Barclays Partner Finance[a] | 4,134 | 0.9 | 0.3 | 1.7 | 1.7 |
| Germany consumer lending[b] | 3,683 | 1.8 | 0.7 | 1.1 | 1.0 |

**Notes**

a On 1 April 2020, the Barclays Partner Finance business moved from Barclays International to Barclays UK. The 2019 comparative figures have not been restated.

b 2019 Germany consumer lending numbers have been restated to include the Fundy unsecured portfolio and other adjustments to write-off rates.

[17] Barclays PLC, Annual Report 2020, Risk Review, Credit Risk, pages 196-197.

**UK cards:** 30 and 90-day arrears rates remained stable at 1.7% and 0.8% respectively, despite balances reducing by c.£4.5bn. Delinquency rates initially increased as some customers missed payments prior to payment holidays being initiated. Subsequently payment holidays and government support schemes were introduced which, coupled with significantly lower spend and balance growth activities, resulted in suppressed flows into delinquency cycles. Upon exit from payment holidays the majority of customers were able to resume making payments. During 2020, a total of 178,000 payment holidays were provided to customers. At 31 December 2020, the book value of the portfolio where payment holidays remain in place was £93m, representing 0.8% of the portfolio.

**UK personal loans:** 30 and 90-day arrears rates both increased by 0.2% to 2.3% and 1.2% respectively driven by a 25% reduction in overall balances, coupled with a higher flow in to delinquency of customers previously granted a payment holiday. During 2020, a total of 84,000 payment holidays were provided to customers. At 31 December 2020, the book value of the portfolio where payment holidays remain in place was £85.4m, representing 1.9% of the portfolio.

**Barclays Partner Finance:** 30-day arrears rate reduced to 0.5% (2019: 0.9%) due to the sale of the motor financing business and the impact of payment holidays however the vast majority of these were exited and customers resumed making payments. A total of 17,000 payment holidays were provided to customers and 18,000 payment holidays were provided to motor financing business customers in the year. At 31 December 2020, the book value of the portfolio where payment holidays remain in place was £6.6m, representing 0.3% of the portfolio.

**US cards:** 30-day arrears rate decreased to 2.5% (2019: 2.7%) due to government support schemes and payment holidays resulting in fewer accounts entering into delinquency. 90-day arrears rate remained stable at 1.4%. Write-off rates were in line with seasonal trends. A total of 251,000 payment holidays were provided to customers in the year. At 31 December 2020, the book value of the portfolio where payment holidays remain in place was £54.7m, representing 0.3% of the portfolio.

**Germany consumer lending:** Increases in 30- and 90-days arrear rates were primarily driven by the drop in the overall balances. A total of 9,000 payment holidays were provided to customers in the year. At 31 December 2020, the book value of the portfolio where payment holidays remain in place was £0.24m, representing 0.01% of the portfolio.

In its 2020 annual report, BNP Paribas provided disclosures in relation to exposures subject to moratoria and government guarantee schemes, including but not limited to information in respect of new loans, loans subject to forbearance measures, expired and outstanding numbers and exposures.

***Extract 10[18]: BNP Paribas, Universal registration document and annual financial report 2020 - Exposures subject to moratoria and government guarantee schemes*** — *France*

## EXPOSURES SUBJECT TO MORATORIA AND PUBLIC GUARANTEE SCHEMES

### EXPOSURES SUBJECT TO MORATORIA

In response to the health crisis, the Group has granted its customers moratoria, most often consisting of extensions of a few months (see also the paragraph *Restructuring of financial assets due to financial difficulties* in note 1.e.5 to the consolidated financial statements). These moratoria may be based on national law (so-called legislative moratoria) or on an agreed or coordinated payment reduction initiative within the banking sector (so-called non-legislative moratoria).

At 31 December 2020, the Group's exposure to loans subject to moratoria[1] (included expired moratoria) amounted to EUR 54.1 billion.

Around 700,000 moratoria[2] expired as at 31 December 2020, *i.e.* 81% of the Group's exposure to loans subject to moratoria[1]. More than 98% of expired moratoria are performing.

➤ **TABLE 51: EXPOSURES SUBJECT TO LEGISLATIVE AND NON LEGISLATIVE MORATORIA[1]** [Audited]

| *In millions of euros* | Gross carrying amount | | | | | | |
|---|---|---|---|---|---|---|---|
| | Total | Performing exposure | | | Non performing exposure | | |
| | | | of which exposures with forbearance measures | of which stage 2 | | of which exposures with forbearance measures | of which unlikely to pay that are not past-due or past-due ≤90 days |
| **Loans and advances subject to moratorium** | **54,125** | **52,845** | **1,693** | **10,249** | **1,280** | **712** | **501** |
| of which households | 16,972 | 16,286 | 524 | 3,387 | 686 | 370 | 233 |
| *of which collateralised by residential immovable property* | *8,098* | *7,827* | *341* | *1,560* | *271* | *160* | *110* |
| of which non-financial corporations | 35,533 | 34,954 | 1,139 | 6,619 | 579 | 332 | 261 |
| *of which SME* | *20,057* | *19,675* | *748* | *3,692* | *382* | *210* | *160* |
| *of which collateralised by commercial immovable property* | *8,574* | *8,364* | *223* | *1,908* | *210* | *160* | *152* |

| 31 December 2020 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions | | | | | | | Gross carrying amount - inflows to non performing exposures |
| Total | Performing exposure | | | Non performing exposure | | | |
| | | of which exposures with forbearance measures | of which stage 2 | | of which exposures with forbearance measures | of which unlikely to pay that are not past-due or past-due ≤90 days | |
| **(1,009)** | **(708)** | **(90)** | **(448)** | **(301)** | **(144)** | **(121)** | **396** |
| (496) | (316) | (29) | (187) | (181) | (74) | (65) | 267 |
| *(102)* | *(70)* | *(18)* | *(55)* | *(32)* | *(18)* | *(15)* | *79* |
| (495) | (380) | (60) | (253) | (115) | (65) | (55) | 127 |
| *(329)* | *(251)* | *(43)* | *(168)* | *(78)* | *(41)* | *(31)* | *88* |
| *(95)* | *(67)* | *(6)* | *(46)* | *(28)* | *(20)* | *(20)* | *85* |

[18] *BNP Paribas, 2020 Universal registration document and annual financial report*, Risks and Capital Adequacy Pillar 3, pages 397-400. Tables 51 and 52 extend over two pages in the original publication and have been presented in two parts for the purposes of this extract to make them readable.

**TABLE 52: BREAKDOWN OF EXPOSURES SUBJECT TO LEGISLATIVE AND NON LEGISLATIVE MORATORIA[1] BY RESIDUAL MATURITY OF MORATORIA** [Audited]

| | | | | | 31 December 2020 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Gross carrying amount | | | | |
| | | | | | Residual maturity of moratoria | | | | |
| *In millions of euros* | Number of obligors | | of which legislative moratoria | of which expired moratoria | ≤3 months | >3 months ≤6 months | >6 months ≤9 months | >9 months ≤12 months | >12 months |
| Loans and advances for which moratorium was offered | 945,424 | 54,371 | | | | | | | |
| Loans and advances subject to moratorium (granted) | 943,617 | 54,125 | 11,697 | 43,964 | 7,456 | 2,206 | 217 | 187 | 95 |
| of which households | | 16,972 | 4,228 | 13,948 | 1,505 | 1,230 | 107 | 136 | 46 |
| *of which collateralised by residential immovable property* | | *8,098* | *2,208* | *6,691* | *771* | *352* | *105* | *134* | *45* |
| of which non-financial corporations | | 35,533 | 7,448 | 28,553 | 5,796 | 974 | 110 | 51 | 49 |
| *of which SME* | | *20,057* | *5,318* | *16,203* | *3,235* | *479* | *92* | *45* | *3* |
| *of which collateralised by commercial immovable property* | | *8,574* | *2,904* | *7,118* | *1,399* | *35* | *22* | *0* | - |

## PUBLIC GUARANTEE SCHEMES

At 31 December 2020, the Group has granted more than 120,000 loans guaranteed by States through its Retail Banking networks of domestic markets and international networks.

**TABLE 53: LOANS AND ADVANCES SUBJECT TO PUBLIC GUARANTEE SCHEMES** [Audited]

| | 31 December 2020 | | | |
|---|---|---|---|---|
| *In millions of euros* | Gross carrying amount | of which exposures with forbearance measures | Public guarantees received | Gross carrying amount - inflows to non performing exposures |
| **Newly originated loans and advances subject to public guarantee schemes** | **24,550** | **17** | **21,688** | **72** |
| of which households | 834 | | | 1 |
| *of which collateralised by residential immovable property* | *6* | | | - |
| of which non-financial corporations | *22,666* | *15* | *20,081* | *54* |
| *of which SME* | *12,591* | | | *24* |
| *of which collateralised by commercial immovable property* | *243* | | | - |

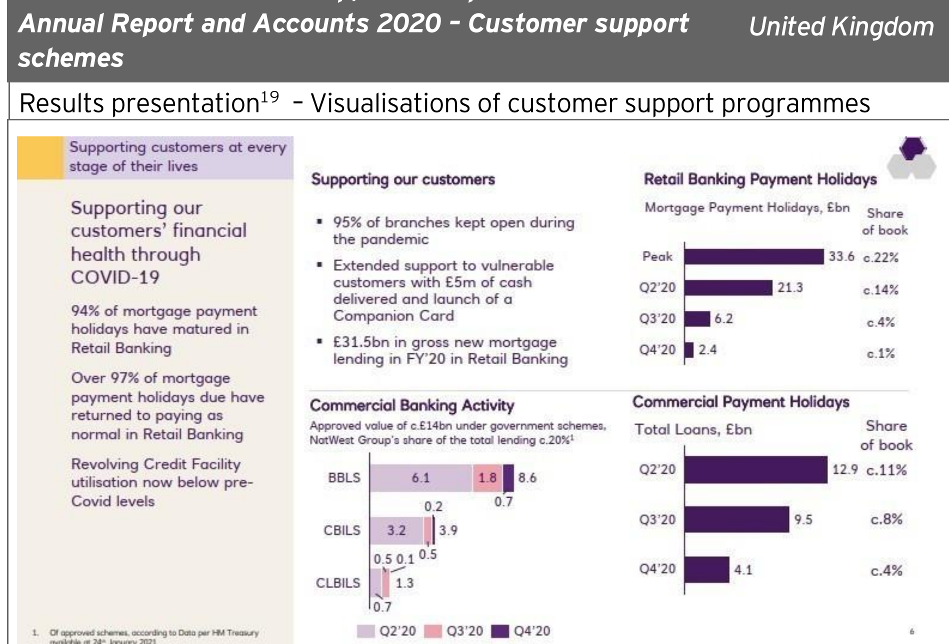
At 30 December 2020, the total amount of loans guaranteed by States, granted by the Group, mainly in France, in Italy and the United States, amounted to EUR 24.6 billion, for a corresponding guarantee amount of EUR 21.7 billion, *i.e.* 88.3% of outstandings. The residual maturity of these guarantees is mostly inferior to less than six months. At 31 December 2020, State-guaranteed loans were spread across all sectors.

In its 2020 results presentation, NatWest provided a snapshot of the impact of payment holidays and various other support schemes, and quarterly evolution of their impact by segment.

NatWest provided granular disclosures by wholesale sector in its 2020 annual report in respect of payment holidays and other support schemes.

| ***Extract 11: NatWest Group, Results presentation and Annual Report and Accounts 2020 – Customer support schemes*** | *United Kingdom* |
|---|---|

Results presentation[19] – Visualisations of customer support programmes




Annual report[20] – Customer support schemes

Government guarantees

During 2020, the UK government launched a series of temporary schemes designed to support businesses deal with the impact of COVID-19. The BBLS, CBILS and CLBILS lending products are originated by NatWest Group but are covered by government guarantees. These are to be set against the outstanding balance of a defaulted facility after the proceeds of the business assets have been applied. The government guarantee is 80% for CBILS and CLBILS and 100% for BBLS. NatWest Group recognises lower LGDs for these lending products as a result, with 0% applied to the government guaranteed part of the exposure.

Notwithstanding the government guarantees, NatWest Group's measurements of PD are unaffected and NatWest Group continues to move exposures to Stage 2 and Stage 3 where a significant deterioration in credit risk or a default is identified.

19 *NatWest Group plc*, Results presentation 2020, page 6.

20 *NatWest Group plc*, *Annual Report 2020*, Risk and capital management: Credit risk, pages 177 and 193.

**Wholesale support schemes**

The table below shows the uptake of Bounce Back Loan Scheme (BBLS), Coronavirus Business Interruption Loan Scheme (CBILS) and Coronavirus Large Business Interruption Loan Scheme (CLBILS) in Wholesale, by sector.

| | BBLS | | | CBILS | | | CLBILS | | |
|---|---|---|---|---|---|---|---|---|---|
| **2020** | Approved volume | Drawdown amount (£m) | % of BBLS to sector loans | Approved volume | Drawdown amount (£m) | % of CBILS to sector loans | Approved volume | Drawdown amount (£m) | % of CLBILS to sector loans |
| Wholesale lending by sector | | | | | | | | | |
| Airlines and aerospace | 253 | 7 | 0.35% | 21 | 9 | 0.45% | 4 | 8 | 0.40% |
| Automotive | 12,301 | 416 | 6.60% | 553 | 139 | 2.21% | 31 | 58 | 0.92% |
| Education | 1,943 | 53 | 3.24% | 111 | 73 | 4.46% | 11 | 37 | 2.26% |
| Health | 9,821 | 314 | 5.41% | 601 | 101 | 1.74% | 3 | 24 | 0.41% |
| Land transport and logistics | 8,575 | 255 | 5.31% | 365 | 97 | 2.02% | 3 | 5 | 0.10% |
| Leisure | 31,148 | 989 | 10.07% | 1,983 | 512 | 5.21% | 34 | 173 | 1.76% |
| Oil and gas | 303 | 9 | 0.58% | 15 | 8 | 0.51% | | | - |
| Retail | 31,315 | 1,078 | 11.75% | 1,548 | 416 | 4.54% | 29 | 121 | 1.32% |
| Property | 67,698 | 1,996 | 5.24% | 2,350 | 664 | 1.74% | 41 | 133 | 0.35% |
| Other (including Business Banking) | 118,486 | 3,181 | 3.57% | 8,504 | 1,752 | 1.97% | 86 | 267 | 0.30% |
| Total | 281,843 | 8,298 | 4.93% | 16,051 | 3,771 | 2.24% | 242 | 826 | 0.49% |

Notes:

(1) The UK government has extended these support schemes to 31 March 2021 and NatWest Group continues to lend under the schemes to customers who meet the applicable lending criteria.

(2) The table contains some cases which as at 31 December 2020 were approved but not yet drawn down. Approved limits as at 31 December 2020 were as follows: BBLS – £8.6 billion (96% drawn); CBILS – £4.2 billion (91% drawn); and CLBILS – £1.3 billion (62% drawn).

- As at 31 December 2020, £2 billion (1%) of the UK Retail Banking mortgage portfolio had active COVID-19 payment holidays. This compared with £37 billion (22%) which had requested a payment holiday during 2020.

In its 2020 annual report, Société Générale Group provided a description of the impact of COVID-19 support measures, including a description of the various schemes, outstanding exposures at year end and impact on SICR.

**Extract 12[21]: Société Générale, Annual Results 2020 – COVID-19 support measures** *France*

COVID-19 SUPPORT MEASURES

The terms of the moratoriums varied from country to country. In the large majority of cases, they have been included in mass schemes (i.e. broadly applied to all outstanding company loans, with no specific granting conditions).

In France, the moratoriums took the form of a six-month payment deferment on loans (until twelve months for the tourism moratoriums) granted to corporates and professionals (principal and interests), with interests on the deferral charged only on the principal. For the French Retail Banking, the outstandings of these moratoriums represented 23.1 billion euros, of which the majority has now expired, with a resumption for most customer of reimbursements without incident.

Abroad, various cases have been observed, both over the duration of the moratorium, and over its terms (interest charged or not for the deferment).

From an accounting point of view, these moratoriums were not considered as substantial modifications of the contractual cash flows of the loans to which they were applied, and therefore did not result in the derecognition of these loans. The application of the IFRS 9 provisions relating to the modification of financial assets (catch-up method with recording of a charge in profit or loss representative of a loss of interests) had no material effect on the financial statements of the Group.

As recommended by the prudential and supervisory authorities, and repeated over by the IASB in a press release of 27 March 2020, the granting of moratoriums directly related to the cash flow difficulties generated by the occurrence of the Covid-19 crisis did not lead to the automatic transfer of these credit outstandings into Stage 2 (under-performing assets), nor into Stage 3 (credit-impaired assets). A case-by-case analysis was conducted on the most significant exposures, and on those with increased risks particularly due to their ante-crisis Basel scoring. At the end of December 2020, 7.5 billion euros of these outstandings are classified in Stage 2 and 730 million euros are downgraded to Stage 3.

In France, in addition to the moratoriums, the Group's entities have contributed to the implementation of support measures decided by the authorities through the study and allocation of State Guaranteed Loans.

Thus, the Group offers until June 2021 to its customers affected by the crisis (professionals and corporate customers) the allocation of State Guaranteed Loan facilities (PGE) within the framework of the 2020 French Amending Finance Act and the conditions set by the decree of 23 March 2020. These are financings made at cost price and guaranteed by the government up to 90% (with a waiting period of two months after the disbursement at the end of which the guarantee period begins). With a maximum amount corresponding in the general case to three months of turnover before taxes, these loans come with a one-year repayment exemption. At the end of this year, the customer can repay the loan, or amortise it over one to five more years, with the possibility of extending the capital franchise for one year. The remuneration conditions of the guarantee are set by the State and are applicable by all French banking institutions: the bank keeps only one share of the guarantee premium paid by the borrower (the amount of which depends on the size of the company and the maturity of the loan) remunerating the risk it bears and which corresponds to the part of the loan not guaranteed by the State (i.e. between 10% and 30% of the loan depending on the size of the borrower).

The State Guaranteed Loans contractual characteristics are those of basic loans (SPPI criterion) and these loans are held by the Group as part of a business model whose objective is to collect contractual cash flows until their maturity; as a result, these loans have been recorded in the consolidated balance sheet under Customer loans at amortised cost.

As at 31 December 2020, the State Guaranteed Loans granted by the Group represent a credit outstanding of approximately 18.6 billion euros (of which 3.4 billion euros classified in Stage 2 and 433 million euros in Stage 3). The State Guaranteed Loans granted by the French Retail Banking amount to 16.7 billion euros (of which 3.3 billion euros classified in Stage 2 and 390 million euros in Stage 3) and new State Guaranteed Loans will be granted until the deadline for granting set by the State on 30 June 2021.

When initially recognised, these loans are recorded at their nominal value, as the Group considers that it is representative of their fair value; and an impairment for expected credit loss based on a probability of default at one year is recorded taking into account the effects of the guarantee insofar as it is an integral part of the loan. The models for calculating expected credit losses also take into account the probabilities of exercise of the extension options, the amount of the loan not guaranteed by the State as well as the waiting period in the enforcement of the guarantee.

The amount of expected credit losses recorded as at 31 December 2020 for all of the State Guaranteed Loans is approximately 80 million euros of which 65 million euros from French Retail Banking.

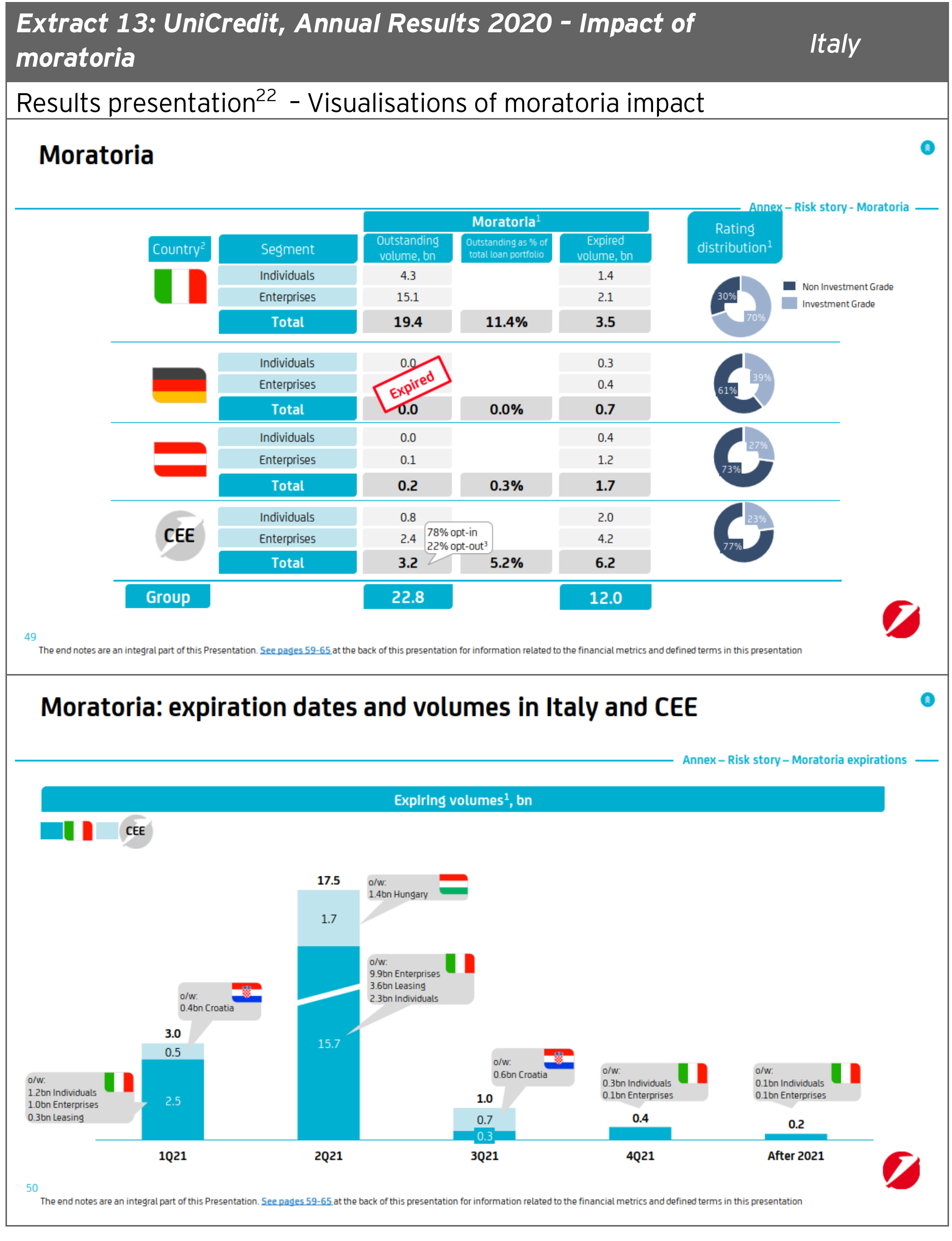
[21] *Société Générale Group, 31.12.2020 Consolidated Financial Statements,* Notes to the Consolidated financial Statements, Note 1 Significant accounting principles, 5. COVID-19, pages 15-16.

In its 2020 results presentation, UniCredit SpA ("UniCredit") provided visualisations of the impact of moratoria on individuals and enterprises by country/geographical area, showing outstanding and expired moratoria volume in billions of euros as well as outstanding moratoria as a percentage to the total loan portfolio and the rating distribution in each case. A further visualisation is provided for moratoria expiration dates and volumes specifically for Italy and CEE and finally one for state guaranteed loans by country/geographical area and their overall impact on UniCredit's total loan portfolio.

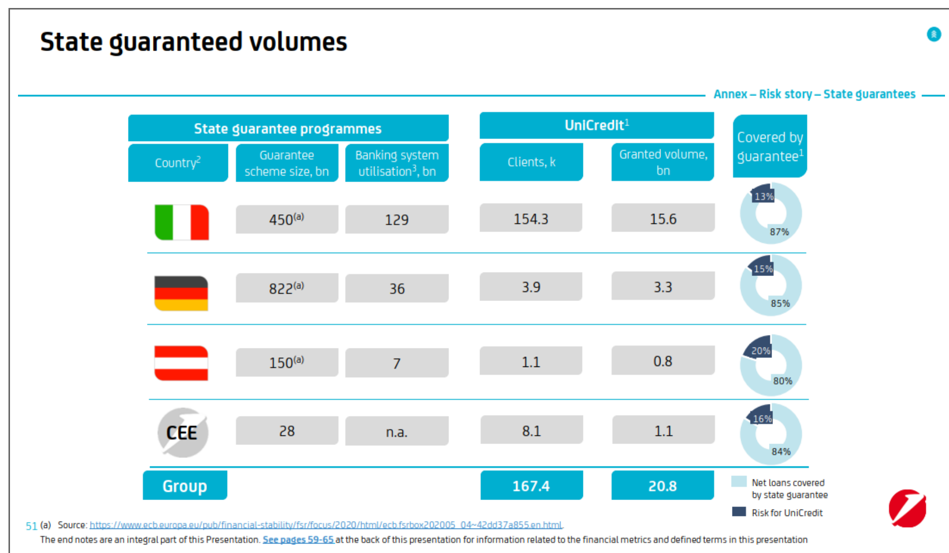
In its 2020 annual report and accounts, UniCredit provided a description of the effects of COVID-19 related moratoria and presented a table showing the gross exposure, ECL allowance and net exposure by grade.

***Extract 13: UniCredit, Annual Results 2020 – Impact of moratoria*** *Italy*

Results presentation[22] – Visualisations of moratoria impact




[22] UniCredit SpA, 4Q20 and FY20 Results, pages 49-51.



## State guaranteed volumes

Annex – Risk story – State guarantees

| State guarantee programmes | | | UniCredit[1] | | Covered by guarantee[1] |
|---|---|---|---|---|---|
| Country[2] | Guarantee scheme size, bn | Banking system utilisation[3], bn | Clients, k | Granted volume, bn | |
| | 450[(a)] | 129 | 154.3 | 15.6 | 13% / 87% |
| | 822[(a)] | 36 | 3.9 | 3.3 | 15% / 85% |
| | 150[(a)] | 7 | 1.1 | 0.8 | 20% / 80% |
| CEE | 28 | n.a. | 8.1 | 1.1 | 16% / 84% |
| Group | | | 167.4 | 20.8 | |



51 (a) Source: https://www.ecb.europa.eu/pub/financial-stability/fsr/focus/2020/html/ecb.fsrbox202005_04~42dd37a855.en.html.
The end notes are an integral part of this Presentation. See pages 59-65 at the back of this presentation for information related to the financial metrics and defined terms in this presentation

## Annual financial report[23] - Description of the effects arising from COVID-19: moratoria

***Effects arising from Covid-19 pandemic***

With reference to credit risk, UniCredit positively sees all the initiatives aimed at supporting the real economy that have been put in place by the EU government and is complementing them with additional measure to support customers over this period and to reduce as much as possible the negative effects of this crisis. All concessions are defined to respond as quickly as possible to the drawback deriving from a temporary slow-down of the economic cycle and related liquidity issues. The potential impact on the bank's risk profile is mitigated with:

- acquisition of public guarantees in line with the mechanisms put in place by the various governments;
- an ex-ante and ongoing evaluation of the client's risk profile.

UniCredit has defined Group guiding principles for underwriting, monitoring and management of Moratorium/emergency schemes, to cope with the new challenges and to early detect potential signals of asset quality deterioration.
With specific reference to the moratorium measures, and in order to provide relief to the lockdown measures put in place for containing Covid-19 outbreak, UniCredit group arranged several initiatives available to customers, whose specific features are different in each country in terms of scope of customers and product types, typically allow the postponement of instalments and the increase in the residual maturity of credit exposures.

Among these initiatives, a number of moratoriums specifically have met the definition of "General Payment" (either legislative or assimilated non-legislative ones) according the "Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the Covid-19 crisis"[31] issued by EBA in April 2020 (and updated in September and December 2020), as broadly applied by credit institution on the basis of national laws or industry- or sector-wide private initiatives. The Group has also implemented other moratorium initiatives not specifically referred to the above mentioned EBA guidelines and therefore granted by the Institutions as additional customer support tools to deal with the context of difficulties and independently from national law or industry- or sector-wide private initiatives.

On the basis of the above-mentioned EBA GLs the Group Guidelines defined by the Parent Company address all legal entities on rating assignment process and regulatory treatment for the above-mentioned Moratoria and Guarantee Schemes.

Specifically, different regulatory treatments are allowed with respect to forbearance measures as well as Default detection, particularly from the point of view of the Unlikely To Pay ("UTP") assessment:

- General Payment Moratoria granting does not trigger automatically a forbearance classification, but a specific assessment is aimed at verifying the financial difficulty situation; in this case UTP assessment shall be applied both during the period of the moratorium and shortly after its end;
- for other moratoria initiatives the ordinary forbearance process is applied testing financial difficulty at concession; in this case UTP assessment shall be applied at concession and afterwards.

Specific guidelines have been established for rating assignment with the request for a forward-looking perspective to be adopted for the qualitative component of the rating to incorporate potential macro-economic rebound combined with sector outlook in case applicable.
Such Guidelines are intended valid up to the duration set for General Payment Moratoria and up to 2020-year end for Bank specific initiatives.

[23] *UniCredit SpA, Annual Report and Accounts 2020*, Consolidated Financial Statements - Part E – Information on risks and hedging policies, pages 278 and 298.

On-balance sheet exposures to customers include all balance-sheet assets regardless of their belonging portfolio (held-for-trading, assets designed and mandatorily at fair value through profit or loss, assets at fair value through other comprehensive income, assets at amortised cost and assets held for sale).

**A.1.5a Other loans and advances subject to Covid-19 measures: gross and net value**

(€ million)

| EXPOSURE TYPES/VALUES | AMOUNTS AS AT 12.31.2020 GROSS EXPOSURE | OVERALL WRITE-DOWNS AND PROVISIONS | NET EXPOSURE |
|---|---|---|---|
| **A. Bad loans** | **22** | **13** | **9** |
| EBA-compliant moratoria loans and advances | 13 | 10 | 3 |
| Other loans and advances with Covid-19 related forbearance measures | 6 | 3 | 3 |
| Newly originated loans and advances | 3 | - | 3 |
| **B. Unlikely to pay loans** | **1,297** | **436** | **861** |
| EBA-compliant moratoria loans and advances | 722 | 346 | 376 |
| Other loans and advances with Covid-19 related forbearance measures | 515 | 70 | 445 |
| Newly originated loans and advances | 60 | 20 | 40 |
| **C. Non-performing past due loans** | **21** | **9** | **12** |
| EBA-compliant moratoria loans and advances | 14 | 5 | 9 |
| Other loans and advances with Covid-19 related forbearance measures | 6 | 4 | 2 |
| Newly originated loans and advances | 1 | - | 1 |
| **D. Performing past due loans** | **554** | **33** | **521** |
| EBA-compliant moratoria loans and advances | 464 | 31 | 433 |
| Other loans and advances with Covid-19 related forbearance measures | 12 | 1 | 11 |
| Newly originated loans and advances | 78 | 1 | 77 |
| **E. Other performing exposures loans** | **37,967** | **713** | **37,254** |
| EBA-compliant moratoria loans and advances | 21,668 | 654 | 21,014 |
| Other loans and advances with Covid-19 related forbearance measures | 161 | 10 | 151 |
| Newly originated loans and advances | 16,138 | 49 | 16,089 |

During 2020 several actions have been taken regarding lending processes across the Group Legal Entities to properly deal with Covid-19 emergency. At the end of December 2020, loans benefitting from moratoria and guarantees amounted to €39,861 million, of which €38,521 million performing and €1,340 million non performing (3,4% of total loans), of which €22 million bad loans, €1,297 million unlikely to pay, €21 million non performing past due. The largest components of the loans benefitting from Covid-19 initiatives are in Italy, representing 84% of Group figures (99% classified as Performing), and in CEE countries, representing 11% of Group figures (92% classified as Performing).

# 3. Economic scenarios

## What we expected

For 2020, banks have significantly adjusted the economic assumptions applied and disclosed in 2019 in respect of forward-looking information.

Going forward, we expect further changes to the number and definition of scenarios, as the impact of the pandemic becomes less pronounced and banks continue to reconsider and redefine their macroeconomic scenarios.

Given the timing of the emergence of the COVID-19 pandemic, the economic assumptions applied and disclosed by banks as of 31 December 2019 in respect of forward-looking information have been adjusted significantly in their 2020 annual financial statements, to reflect the development of the pandemic. This has been done by amending the existing scenarios and, in some cases, by increasing or reducing the number of scenarios as well as changing the weights assigned to each scenario.

This section sets out expectations of the disclosures that we consider should be provided where relevant, to inform users of the financial statements of the key changes to macroeconomic assumptions and the related economic scenarios which affect the ECL estimate. It also provides extracts of the disclosures made by banks in their annual financial statements in this respect, for illustration purposes.

***Multiple economic scenarios and economic forecasts***

Paragraph 125 of IAS 1 *Presentation of Financial Statements* requires entities to disclose information about the assumptions made about the future, and other major sources of estimation uncertainty at the end of the reporting period, that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the financial year. Given the significant changes in the macroeconomic situation due to COVID-19, we considered it particularly important that banks provide the following qualitative and quantitative disclosures, where relevant:

- Any significant changes to the economic outlook and the value of the key macroeconomic assumptions used in the estimate of ECL since the last annual reporting period and the reason for these changes
- If there has been a change in the number of scenarios and/or weights assigned to individual scenarios since the last annual reporting period, how these alternative economic scenarios have been selected and the weights assigned
- Any changes in the assumptions made in relation to the forecast period used for scenario modelling

Further examples of additional disclosures banks could have considered providing where relevant included the following:

- An explanation of whether and why correlations and key economic drivers in the model are still valid and whether any adjustments to these have been made
- A narrative description of the facts and circumstances that underpin the economic scenarios. These could include, for example: considerations around medical developments and the evolution of the pandemic; expectations around magnitude and length of restrictions imposed by government; the impact of any government support programmes and consumer and corporate responses; etc.
- If there are material differences in the assumptions used for the multiple economic scenarios compared to any regulatory expectations, an explanation of the reasons for those differences

- How material non-linear relationships between economic factors and credit losses are reflected in the estimate
- Where relevant, how the bank applies forecast scenarios differently to specific portfolios with idiosyncratic features and specific sectors (e.g., those more directly and materially affected by the coronavirus pandemic, such as the travel, hospitality and leisure sectors)
- The governance in place to support the ECL estimation process

***Illustration of the key parameters***

To help users of financial statements better understand the trend of the key macroeconomic inputs over the forecast period and allow a visualisation in a concise and effective way, banks may consider using a graph to show how the inputs are expected to change for each of the years in the forecast period, in line with the recommendation issued by the Disclosures about Expected Credit Losses (DECL) Taskforce[24] on this subject.

Banks might have considered providing a graph for only one macroeconomic assumption, such as GDP, to illustrate the overall shape of the scenario. To the extent that other macroeconomic assumptions are expected to behave differently and not follow the overall shape, it might be helpful to provide additional graphs for material parameters.

Banks with a diversified global presence should consider providing the disclosures for each significant geographical region.

## What we observed

For the purposes of their annual financial statements for 2020, banks have significantly adjusted the economic assumptions applied and disclosed in 2019 in respect of forward-looking information, to reflect the development of the pandemic.

Banks generally provided the disclosures that were expected in their annual financial statements for 2020 and presented extensive information – both quantitative and qualitative – to explain the changes they made in their models, assumptions, forecasts and scenarios along the lines of the expectations noted above. In addition to the disclosures provided in their audited financial statements, banks provided additional analysis and information regarding the development of these changes and their impact on a quarterly basis in the other sections of their annual reports and in the presentations to investors and analysts. We have provided several examples for illustration purposes in this respect.

We noted diversity in practise in relation to the number of scenarios used, the weights assigned to them and method of presentation employed by each bank. A number of banks used graphs as well as tabular and narrative information while others provided tabular and narrative disclosures of varying degrees of granularity. The diversity is more pronounced in the relevant sensitivity disclosures (refer to Section 5 below).

[24] *Taskforce on Disclosures about Expected Credit Losses report on 'Recommendations on a comprehensive set of IFRS 9 Expected Credit Loss Disclosures', December 2019.*

## How we see it

While banks have provided a wealth of information about their economic scenarios and related assumptions, the basis of presentation is not always immediately comparable, which can be a challenge at times. For example, some of the banks whose annual reports we reviewed provided averages of the macroeconomic inputs, such as GDP growth, on an annualised basis, quarterly averages, 5–year averages or the peaks and troughs values over the forecast period.

In addition, it is necessary to take into account the effect of weighting of the scenarios, which can change the impact of the economic assumptions substantially. A user would need to combine the two elements (weightings and macroeconomic inputs) to have a full picture. For example, two banks may have assumed similar scenarios, but the effect of weighting might be such that the impact on ECL of those scenarios is substantially different and, equally, they could have different assumptions on the scenarios, but the weighting applied might be such that the ultimate effect on ECL ends up being almost the same. It is, therefore, important for banks to provide comprehensive disclosures regarding weightings as well as disclosures around key macroeconomic inputs, especially given the changes compared to prior years observed in 2020 due to the impact of COVID-19. While the combined information was generally available, it remains difficult to assess the combined impact when sensitivity analysis is not provided in relation to each scenario.

Going forward, we would expect to see:

- Further changes to the number and definition of scenarios – as the impact of the pandemic becomes less pronounced, banks would continue to reconsider and redefine their macroeconomic scenarios to reflect this, continuing the trend of doing so in 2020 compared to 2019. It is important for banks to disclose inputs and other variables for each of the years in the forecast period rather that providing averages for the whole forecast period. Analysts may need more granular information. However, this could be provided outside the financial statements, for example, in the data packs that accompany the quarterly releases. Given the inherent volatility in the inputs, information should be available for each period to provide users with a better basis for understanding the bank's outlook.
- Significant judgement will continue to be required given the high level of uncertainty involved.
- Extensive quantitative and qualitative disclosures like those provided in their 2020 annual financial statements should continue to be provided to explain the evolution of scenarios, assumptions and impact on ECL, albeit that comparability is likely to remain an issue in this respect.

## Examples

In its 2020 annual report, Barclays PLC presented information (narrative, tabular and graphical) for each of its macroeconomic scenarios and the key input values for each of the forecast periods, by main country of operations.

***Extract 14[25]: Barclays PLC, Annual Report 2020 – Description of key changes in the macroeconomic scenarios and disclosure of the weights of the scenarios and values of the key variables***

*United Kingdom*

### Measurement uncertainty and sensitivity analysis

The measurement of ECL involves complexity and judgement, including estimation of probabilities of default (PD), loss given default (LGD), a range of unbiased future economic scenarios, estimation of expected lives, estimation of exposures at default (EAD) and assessing significant increases in credit risk.

The Group uses a five-scenario model to calculate ECL. An external consensus forecast is assembled from key sources, including HM Treasury (short and medium-term forecasts), Bloomberg (based on median of economic forecasts) and the Urban Land Institute (for US House Prices), which forms the Baseline scenario. In addition, two adverse scenarios (Downside 1 and Downside 2) and two favourable scenarios (Upside 1 and Upside 2) are derived, with associated probability weightings. The adverse scenarios are calibrated to a broadly similar severity to Barclays' internal stress tests and stress scenarios provided by regulators whilst also considering IFRS 9 specific sensitivities and non-linearity. Downside 2 is benchmarked to the Bank of England's stress scenarios and to the most severe scenario from Moody's inventory, but is not designed to be the same. The favourable scenarios are calibrated to reflect upside risks to the Baseline scenario to the extent that is broadly consistent with recent favourable benchmark scenarios. All scenarios are regenerated at a minimum semi-annually. The scenarios include eight economic variables, (GDP, unemployment, House Price Index (HPI) and base rates in both the UK and US markets), and expanded variables using statistical models based on historical correlations. The upside and downside shocks are designed to evolve over a five-year stress horizon, with all five scenarios converging to a steady state after approximately eight years.

Scenarios used to calculate the Group's ECL charge were reviewed and updated regularly throughout 2020, following the outbreak of the COVID-19 pandemic in the first quarter. The current Baseline scenario reflects the latest consensus economic forecasts with a steady recovery in GDP in the UK and the US, and unemployment continuing to decrease in the US and peaking at Q221 in the UK followed by a steady decline. In the downside scenarios, an economic downturn in early 2021 in the UK and the US begins to recover later in the year, with unemployment increasing to the end of 2021. In the upside scenarios, the strong rebound in UK and US GDP continues into 2021, following the bounce-back in growth in Q320 and, subsequently, the projections stay above the year on year growth rates seen in the Baseline for a prolonged period of time before finally reverting to the long-term run rate. This reflects the assumption of approved vaccines being successfully rolled out throughout 2021 and pent up savings being deployed into a more certain consumer environment to drive significant growth. Scenario weights have been updated to reflect the latest economics.

As a result of government and bank support measures, significant credit deterioration has not yet occurred. This delay increases uncertainty on the timing of the stress and the realisation of defaults. Management has applied COVID-19 specific adjustments to modelled outputs to reflect the temporary nature of ongoing government support, the uncertainty in relation to the timing of stress and the degree to which economic consensus has yet captured the range of economic uncertainty, particularly in the UK. As a result, ECL is higher than would be the case if it were based on the forecast economic scenarios alone.

#### Scenario weights (audited)

The methodology for estimating probability weights for each of the scenarios involves a comparison of the distribution of key historical UK and US macroeconomic variables against the forecast paths of the five scenarios. The methodology works such that the Baseline (reflecting current consensus outlook) has the highest weight and the weights of adverse and favourable scenarios depend on the deviation from the Baseline; the further from the Baseline, the smaller the weight. This is reflected in the table below where the probability weights of the scenarios are shown. A single set of five scenarios is used across all portfolios and all five weights are normalised to equate to 100%. The same scenarios and weights that are used in the estimation of expected credit losses are also used for Barclays internal planning purposes. The impacts across the portfolios are different because of the sensitivities of each of the portfolios to specific macroeconomic variables, for example, mortgages are highly sensitive to house prices, and credit cards and unsecured consumer loans are highly sensitive to unemployment.

The range of forecast paths generated in the calculation of the weights at 31 December 2020 is much wider than in previous periods due to the uncertainty caused by COVID-19, thus the Upside and Downside scenarios are further away from the tails of the distribution than previously, resulting in a more even spread of weights than at 31 December 2019.

The economic environment remains uncertain and future impairment charges may be subject to further volatility (including from changes to macroeconomic variable forecasts) depending on the longevity of the COVID-19 pandemic and related containment measures, as well as the longer term effectiveness of central bank, government and other support measures.

The tables below show the key consensus macroeconomic variables used in the baseline scenario (3-year annual paths), the probability weights applied to each scenario and the macroeconomic variables by scenario using 'specific bases' i.e. the most extreme position of each variable in the context of the scenario, for example, the highest unemployment for downside scenarios and the lowest unemployment for upside scenarios. 5-year average tables and movement over time graphs provide additional transparency.

Annual paths show quarterly averages for the year (unemployment and base rate) or change in the year (GDP and HPI). Expected worst point is the most negative quarter in the relevant 3 year period, which is calculated relative to the start point for GDP and HPI.

**Baseline average macroeconomic variables used in the calculation of ECL**

| As at 31 December 2020 | 2021 % | 2022 % | 2023 % | Expected Worst Point % |
|---|---|---|---|---|
| UK GDP[a] | 6.3 | 3.3 | 2.6 | 1.2 |
| UK unemployment[b] | 6.7 | 6.4 | 5.8 | 7.4 |
| UK HPI[c] | 2.4 | 2.3 | 5.0 | 0.6 |
| UK bank rate | – | (0.1) | – | (0.1) |
| US GDP[a] | 3.9 | 3.1 | 2.9 | 1.0 |
| US unemployment[d] | 6.9 | 5.7 | 5.6 | 7.5 |
| US HPI[e] | 2.8 | 4.7 | 4.7 | 0.7 |
| US federal funds rate | 0.3 | 0.3 | 0.3 | 0.3 |


**Baseline average macroeconomic variables used in the calculation of ECL**

| As at 31 December 2020 | 2021 % | 2022 % | 2023 % | Expected Worst Point % |
|---|---|---|---|---|
| UK GDP[a] | 6.3 | 3.3 | 2.6 | 1.2 |
| UK unemployment[b] | 6.7 | 6.4 | 5.8 | 7.4 |
| UK HPI[c] | 2.4 | 2.3 | 5.0 | 0.6 |
| UK bank rate | – | (0.1) | – | (0.1) |
| US GDP[a] | 3.9 | 3.1 | 2.9 | 1.0 |
| US unemployment[d] | 6.9 | 5.7 | 5.6 | 7.5 |
| US HPI[e] | 2.8 | 4.7 | 4.7 | 0.7 |
| US federal funds rate | 0.3 | 0.3 | 0.3 | 0.3 |


[25] *Barclays PLC, Annual Report 2020*, Risk Management, Credit Risk, pages 181-182 and 185-186. The bank has presented tabular disclosures for all scenarios similar to those presented for the baseline scenario in this extract, which can be found on pages 183-184 in its annual report, in respect of the average macroeconomic variables used in the calculation of ECL which have not been included in this illustrative extract.

| As at 31 December 2019 | 2020 % | 2021 % | 2022 % | Expected Worst Point % |
|---|---|---|---|---|
| UK GDP[a] | 1.3 | 1.5 | 1.6 | 0.3 |
| UK unemployment[b] | 4.1 | 4.2 | 4.2 | 4.2 |
| UK HPI[c] | 1.9 | 3.1 | 3.6 | 0.3 |
| UK bank rate | 0.6 | 0.5 | 0.8 | 0.5 |
| US GDP[a] | 2.1 | 1.9 | 1.9 | 0.5 |
| US unemployment[d] | 3.6 | 3.9 | 4.0 | 4.0 |
| US HPI[e] | 3.4 | 2.9 | 2.8 | 1.0 |
| US federal funds rate | 1.7 | 1.5 | 1.7 | 1.5 |

**Notes**

a Average Real GDP seasonally adjusted change in year; expected worst point is the minimum growth relative to Q420 (2019: Q419) based on a 12-quarter period.

b Average UK unemployment rate 16-year+; expected worst point is the highest rate in the 12-quarter period starting Q121 (2019: Q120).

c Change in year end UK HPI = Halifax All Houses, All Buyers index, relative to prior year end; worst point is based on minimum growth relative to Q420 (2019: Q419) based on a 12-quarter period.

d Average US civilian unemployment rate 16-year+; expected worst point is the highest rate in the 12-quarter period starting Q121 (2019: Q120).

e Change in year end US HPI = FHFA house price index, relative to prior year end; worst point is based on minimum growth relative to Q420 (2019: Q419) based on a 12-quarter period.

**Scenario probability weighting (audited)**

| | Upside 2 % | Upside 1 % | Baseline % | Downside 1 % | Downside 2 % |
|---|---|---|---|---|---|
| **As at 31 December 2020** | | | | | |
| Scenario probability weighting | **20.2** | **24.2** | **24.7** | **15.5** | **15.4** |
| **As at 31 December 2019** | | | | | |
| Scenario probability weighting | 10.1 | 23.1 | 40.8 | 22.7 | 3.3 |

Specific bases shows the most extreme position of each variable in the context of the scenario, for example, the highest unemployment for downside scenarios, average unemployment for baseline scenarios and lowest unemployment for upside scenarios. GDP and HPI downside and upside scenario data represents the lowest and highest points relative to the start point in the 20 quarter period.

**Macroeconomic variables used in the calculation of ECL (specific bases)[a] (audited)**

| | Upside 2 % | Upside 1 % | Baseline % | Downside 1 % | Downside 2 % |
|---|---|---|---|---|---|
| **As at 31 December 2020** | | | | | |
| UK GDP[b] | **14.2** | **8.8** | **0.7** | **(22.1)** | **(22.1)** |
| UK unemployment[c] | **4.0** | **4.0** | **5.7** | **8.4** | **10.1** |
| UK HPI[d] | **48.2** | **30.8** | **3.6** | **(4.5)** | **(18.3)** |
| UK bank rate[c] | **0.1** | **0.1** | **–** | **0.6** | **0.6** |
| US GDP[b] | **15.7** | **12.8** | **1.6** | **(10.6)** | **(10.6)** |
| US unemployment[c] | **3.8** | **3.8** | **6.4** | **13.0** | **13.7** |
| US HPI[d] | **42.2** | **30.9** | **3.8** | **(3.7)** | **(15.9)** |
| US federal funds rate[c] | **0.1** | **0.1** | **0.3** | **1.3** | **1.3** |
| **As at 31 December 2019** | | | | | |
| UK GDP[b] | 15.4 | 11.7 | 1.5 | 0.2 | (4.6) |
| UK unemployment[c] | 3.4 | 3.8 | 4.1 | 5.8 | 8.8 |
| UK HPI[d] | 41.1 | 28.8 | 2.8 | (6.3) | (31.1) |
| UK bank rate[c] | 0.5 | 0.5 | 0.7 | 2.8 | 4.0 |
| US GDP[b] | 17.9 | 14.9 | 2.1 | 0.5 | (3.0) |
| US unemployment[c] | 3.0 | 3.5 | 3.9 | 5.4 | 8.5 |
| US HPI[d] | 35.8 | 23.7 | 3.2 | 0.3 | (16.7) |
| US federal funds rate[c] | 1.5 | 1.5 | 1.8 | 3.0 | 3.5 |

Average basis represents the average quarterly value of variables in the 20 quarter period with GDP and HPI based on yearly average and quarterly CAGRs respectively.

**Macroeconomic variables used in the calculation of ECL (5-year averages)[a] (audited)**

| | Upside 2 % | Upside 1 % | Baseline % | Downside 1 % | Downside 2 % |
|---|---|---|---|---|---|
| **As at 31 December 2020** | | | | | |
| UK GDP[e] | **2.5** | **1.6** | **0.7** | **0.1** | **(0.9)** |
| UK unemployment[f] | **5.0** | **5.3** | **5.7** | **6.5** | **7.2** |
| UK HPI[g] | **8.2** | **5.5** | **3.6** | **(0.2)** | **(3.6)** |
| UK bank rate[f] | **0.3** | **0.2** | **–** | **–** | **(0.1)** |
| US GDP[e] | **2.9** | **2.4** | **1.6** | **0.8** | **0.1** |
| US unemployment[f] | **5.3** | **5.7** | **6.4** | **8.3** | **10.4** |
| US HPI[g] | **7.3** | **5.5** | **3.8** | **0.8** | **(3.0)** |
| US federal funds rate[f] | **0.5** | **0.5** | **0.3** | **0.3** | **0.3** |
| **As at 31 December 2019** | | | | | |
| UK GDP[e] | 2.9 | 2.2 | 1.5 | 0.8 | (0.6) |
| UK unemployment[f] | 3.6 | 3.9 | 4.1 | 5.1 | 7.0 |
| UK HPI[g] | 7.1 | 5.2 | 2.8 | (1.1) | (6.9) |
| UK bank rate[f] | 0.6 | 0.6 | 0.7 | 2.1 | 3.1 |
| US GDP[e] | 3.4 | 2.9 | 2.1 | 1.3 | (0.1) |
| US unemployment[f] | 3.2 | 3.7 | 3.9 | 4.7 | 6.6 |
| US HPI[g] | 6.3 | 4.3 | 3.2 | 1.6 | (3.4) |
| US federal funds rate[f] | 1.7 | 1.7 | 1.8 | 2.8 | 3.2 |

**Notes**

a UK GDP = Real GDP growth seasonally adjusted; UK unemployment = UK unemployment rate 16-year+; UK HPI = Halifax All Houses, All Buyers Index; US GDP = Real GDP growth seasonally adjusted; US unemployment = US civilian unemployment rate 16-year+; US HPI = FHFA house price index.

b Maximum growth relative to Q419 (2019: Q418), based on 20 quarter period in Upside scenarios; 5-year yearly average CAGR in Baseline; minimum growth relative to Q419 (2019: Q418), based on 20 quarter period in Downside scenarios.

c Lowest quarter in Upside scenarios; 5-year average in Baseline; highest quarter in Downside scenarios. Period based on 20 quarters from Q120 (2019: Q119).

d Maximum growth relative to Q419 (2019: Q418), based on 20 quarter period in Upside scenarios; 5-year quarter end CAGR in Baseline; minimum growth relative to Q419 (2019: Q418), based on 20 quarter period in Downside scenarios.

e 5-year yearly average CAGR, starting 2019 (2019: 2018).

f 5-year average, Period based on 20 quarters from Q120 (2019: Q119).

g 5-year quarter end CAGR, starting Q419 (2019: Q418).

2019 data presented on a revised, simplified basis for ease of comparison.

The graphs below plot the historical data for GDP growth rate and unemployment rate in the UK and US as well as the forecasted data under each of the five scenarios.

GDP growth based on year on year growth each quarter (Q/(Q-4)).

In its 2020 annual report, BBVA provided disclosures in respect of key inputs to its macroeconomic scenarios – GDP, unemployment, HPI - by country for each scenario.

**Extract 15[26]: BBVA, Annual Results 31 December 2020 - Macroeconomic scenarios, key inputs by country** *Spain*

Macroeconomic scenarios as a result of the COVID-19 pandemic

The COVID-19 pandemic has generated a macroeconomic uncertainty situation with a direct impact on credit risk of the entities, particularly, on the expected credit losses under IFRS 9. Even though the situation is unclear and of an unforeseeable time length, the expectation is that this situation will provoke a severe recession followed by an economic recovery, which will not achieve the pre-crisis GDP levels in the short-term, supported by the measures issued by governments and monetary authorities.

This situation has allowed the accounting authorities and the banking supervisors to adopt measures in order to mitigate the impacts that this crisis could imply on the calculation of expected credit losses under IFRS 9 as well as on solvency, urging:

- the entities to evaluate all the available information, weighing more the long-term forecasts against the short-term economic situation
- the governments to adopt measures to avoid the effects of impairment,
- the entities to develop managerial measures as the design of specific products adapted to the situation which could occur during this crisis.

Almost all accounting and prudential authorities have issued recommendations or measures within the COVID-19 crisis framework regarding the estimation of the expected losses under IFRS 9 in a coordinated manner.

The common denominator of all of these recommendations is that, given the difficulty of establishing reliable macroeconomic forecasts, the transitory term of the economic shock and the need to incorporate the effect of the mitigating measures issued by the governments, a review of the automatic application of the models in order to increase the weight of the long-term macroeconomic forecasts in the calculation of the expected losses is needed. As a result thereof, the expected outcome over the lifetime of the transactions will have more weight than the short-term macroeconomic impact.

In this respect, the BBVA Group has taken into account those recommendations in the calculation of the expected credit losses under IFRS 9, considering that the economic situation caused by the COVID-19 pandemic is transitory and will be followed by a recovery, even if there is uncertainty over the level and the time period of such recovery. As a consequence, different scenarios have been taken into consideration in the calculation of expected losses, resulting in the model management believes suits best the current economic situation and the combined recommendations issued by the authorities. In addition to the outcome of the calculation of the scenarios, individual analysis of exposures which could be most affected by the circumstances caused by the COVID-19, have been taken into account.

The estimate for the next five years of the Gross Domestic Product (GDP), of the variation in the unemployment rate and of the House Price Index (HPI), for the most relevant countries where it represents a significant factor, is determined by BBVA Research and it has been used at the time of the calculation of the expected credit loss as of December 31, 2020:

Positive scenario of GDP, unemployment rate and HPI for the main geographies

| | Spain | | | Mexico | | | Turkey | |
|---|---|---|---|---|---|---|---|---|
| Date | GDP | Unemployment | HPI | GDP | Unemployment | HPI | GDP | Unemployment |
| 2020 | (11.20%) | 16.44% | (1.44%) | (8.85%) | 4.57% | 1.71% | 2.07% | 13.45% |
| 2021 | 6.63% | 16.03% | (3.28%) | 4.58% | 5.40% | (1.23%) | 9.08% | 12.60% |
| 2022 | 6.27% | 12.72% | 4.56% | 3.80% | 5.17% | 0.32% | 5.30% | 11.58% |
| 2023 | 2.95% | 10.82% | 5.79% | 1.62% | 5.04% | 0.31% | 4.13% | 11.58% |
| 2024 | 2.07% | 9.58% | 3.66% | 1.47% | 4.91% | 1.01% | 4.11% | 11.19% |
| 2025 | 2.01% | 8.55% | 3.57% | 1.47% | 4.76% | 1.72% | 4.10% | 10.85% |

| | Peru | | Argentina | | Colombia | |
|---|---|---|---|---|---|---|
| Date | GDP | Unemployment | GDP | Unemployment | GDP | Unemployment |
| 2020 | (11.74%) | 12.75% | (10.64%) | 13.60% | (6.80%) | 18.14% |
| 2021 | 12.56% | 10.29% | 9.95% | 14.39% | 6.80% | 16.14% |
| 2022 | 5.25% | 10.00% | 3.52% | 11.88% | 3.70% | 14.53% |
| 2023 | 3.68% | 8.73% | 2.08% | 8.99% | 3.15% | 14.28% |
| 2024 | 3.58% | 7.23% | 2.11% | 7.69% | 3.27% | 12.49% |
| 2025 | 3.35% | 6.88% | 2.14% | 6.78% | 3.60% | 12.28% |

[26] *BBVA, Annual Report 2020, Consolidated Financial Statements and Auditors' report,* Note 7.2.1 Measurement of expected credit loss (ECL), Macroeconomic scenarios as a result of the COVID-19 pandemic, pages 58-59.

Estimate of GDP, unemployment rate and HPI for the main geographies

| Date | Spain GDP | Spain Unemployment | Spain HPI | Mexico GDP | Mexico Unemployment | Mexico HPI | Turkey GDP | Turkey Unemployment |
|---|---|---|---|---|---|---|---|---|
| 2020 | (11.48%) | 16.95% | (1.98%) | (9.25%) | 4.62% | 1.81% | (0.01%) | 13.98% |
| 2021 | 5.99% | 17.51% | (5.08%) | 3.71% | 5.57% | (1.32%) | 5.52% | 14.05% |
| 2022 | 6.04% | 14.35% | 3.48% | 3.53% | 5.35% | 0.15% | 4.53% | 12.58% |
| 2023 | 2.93% | 12.41% | 5.44% | 1.55% | 5.19% | 0.31% | 4.01% | 11.95% |
| 2024 | 2.07% | 11.14% | 3.20% | 1.45% | 5.03% | 1.02% | 3.99% | 11.38% |
| 2025 | 2.01% | 9.99% | 3.12% | 1.46% | 4.88% | 1.71% | 3.98% | 11.03% |

| Date | Peru GDP | Peru Unemployment | Argentina GDP | Argentina Unemployment | Colombia GDP | Colombia Unemployment |
|---|---|---|---|---|---|---|
| 2020 | (13.04%) | 12.80% | (13.00%) | 13.98% | (7.51%) | 18.23% |
| 2021 | 10.05% | 10.48% | 5.54% | 15.40% | 5.48% | 16.40% |
| 2022 | 4.52% | 10.23% | 2.54% | 12.80% | 3.46% | 14.83% |
| 2023 | 3.69% | 8.93% | 1.98% | 9.60% | 3.15% | 14.57% |
| 2024 | 3.58% | 7.41% | 1.98% | 8.18% | 3.27% | 12.78% |
| 2025 | 3.35% | 7.06% | 2.01% | 7.28% | 3.60% | 12.55% |

Negative scenario of GDP, unemployment rate and HPI for the main geographies

| Date | Spain GDP | Spain Unemployment | Spain HPI | Mexico GDP | Mexico Unemployment | Mexico HPI | Turkey GDP | Turkey Unemployment |
|---|---|---|---|---|---|---|---|---|
| 2020 | (11.76%) | 17.44% | (2.60%) | (9.64%) | 4.67% | 1.89% | (2.10%) | 14.49% |
| 2021 | 5.37% | 18.94% | (6.69%) | 2.84% | 5.75% | (1.48%) | 1.75% | 15.51% |
| 2022 | 5.82% | 15.92% | 2.49% | 3.25% | 5.53% | (0.06%) | 3.56% | 13.64% |
| 2023 | 2.88% | 13.99% | 4.94% | 1.48% | 5.34% | 0.17% | 3.92% | 12.33% |
| 2024 | 2.03% | 12.70% | 2.45% | 1.41% | 5.17% | 0.99% | 3.91% | 11.56% |
| 2025 | 1.97% | 11.45% | 2.36% | 1.41% | 5.02% | 1.70% | 3.91% | 11.20% |

| Date | Peru GDP | Peru Unemployment | Argentina GDP | Argentina Unemployment | Colombia GDP | Colombia Unemployment |
|---|---|---|---|---|---|---|
| 2020 | (14.33%) | 12.85% | (15.28%) | 14.34% | (8.25%) | 18.31% |
| 2021 | 7.53% | 10.69% | 0.89% | 16.38% | 4.16% | 16.66% |
| 2022 | 3.78% | 10.48% | 1.33% | 13.69% | 3.16% | 15.10% |
| 2023 | 3.69% | 9.15% | 1.86% | 10.19% | 3.15% | 14.84% |
| 2024 | 3.57% | 7.62% | 1.83% | 8.63% | 3.27% | 13.04% |
| 2025 | 3.35% | 7.27% | 1.86% | 7.75% | 3.60% | 12.80% |

Negative scenario of GDP, unemployment rate and HPI for the main geographies

| Date | Spain GDP | Spain Unemployment | Spain HPI | Mexico GDP | Mexico Unemployment | Mexico HPI | Turkey GDP | Turkey Unemployment |
|---|---|---|---|---|---|---|---|---|
| 2020 | (11.76%) | 17.44% | (2.60%) | (9.64%) | 4.67% | 1.89% | (2.10%) | 14.49% |
| 2021 | 5.37% | 18.94% | (6.69%) | 2.84% | 5.75% | (1.48%) | 1.75% | 15.51% |
| 2022 | 5.82% | 15.92% | 2.49% | 3.25% | 5.53% | (0.06%) | 3.56% | 13.64% |
| 2023 | 2.88% | 13.99% | 4.94% | 1.48% | 5.34% | 0.17% | 3.92% | 12.33% |
| 2024 | 2.03% | 12.70% | 2.45% | 1.41% | 5.17% | 0.99% | 3.91% | 11.56% |
| 2025 | 1.97% | 11.45% | 2.36% | 1.41% | 5.02% | 1.70% | 3.91% | 11.20% |

| Date | Peru GDP | Peru Unemployment | Argentina GDP | Argentina Unemployment | Colombia GDP | Colombia Unemployment |
|---|---|---|---|---|---|---|
| 2020 | (14.33%) | 12.85% | (15.28%) | 14.34% | (8.25%) | 18.31% |
| 2021 | 7.53% | 10.69% | 0.89% | 16.38% | 4.16% | 16.66% |
| 2022 | 3.78% | 10.48% | 1.33% | 13.69% | 3.16% | 15.10% |
| 2023 | 3.69% | 9.15% | 1.86% | 10.19% | 3.15% | 14.84% |
| 2024 | 3.57% | 7.62% | 1.83% | 8.63% | 3.27% | 13.04% |
| 2025 | 3.35% | 7.27% | 1.86% | 7.75% | 3.60% | 12.80% |

In its 2020 annual report, HSBC Holdings Plc provided disclosures (narrative, tabular and graphical) in respect of its economic scenarios, key input values by forecast period and evolution compared to the prior year by main country of operations.

***Extract 16[27]: HSBC Holdings Plc, Annual Report and Accounts 2020 - Macroeconomic variables across the various scenarios and visualisation of GDP forecast as a key input to the macroeconomic scenarios, by country***

*United Kingdom*

## Measurement uncertainty and sensitivity analysis of ECL estimates

(Audited)

The recognition and measurement of ECL involves the use of significant judgement and estimation. We form multiple economic scenarios based on economic forecasts, apply these assumptions to credit risk models to estimate future credit losses, and probability-weight the results to determine an unbiased ECL estimate. Management judgemental adjustments are used to address late-breaking events, data and model limitations, model deficiencies and expert credit judgements.

### Methodology

Four economic scenarios have been used to capture the exceptional nature of the current economic environment and to articulate management's view of the range of potential outcomes. Scenarios produced to calculate ECL are aligned to HSBC's top and emerging risks. Three of these scenarios are drawn from consensus forecasts and distributional estimates. The Central scenario is deemed the 'most likely' scenario, and usually attracts the largest probability weighting, while the outer scenarios represent the tails of the distribution, which are less likely to occur. The Central scenario is created using the average of a panel of external forecasters, while consensus Upside and Downside scenarios are created with reference to distributions for select markets that capture forecasters' views of the entire range of outcomes. Management has chosen to use an additional scenario to represent its view of severe downside risks. The use of an additional scenario is in line with HSBC's forward economic guidance methodology and has been regularly used over the course of 2020. Management may include additional scenarios if it feels that the consensus scenarios do not adequately capture the top and emerging risks. Unlike the consensus scenarios, these additional scenarios are driven by narrative assumptions, could be country-specific and may result in shocks that drive economic activity permanently away from trend.

#### Description of economic scenarios

The economic assumptions presented in this section have been formed by HSBC with reference to external forecasts specifically for the purpose of calculating ECL.

The world economy experienced a deep economic shock in 2020. As Covid-19 spread globally, governments in many of our markets sought to limit the human impact by imposing significant restrictions on mobility, in turn driving the deep falls in activity that were observed in the first half of the year. Restrictions were eased as cases declined in response to the initial measures, which supported an initial rebound in economic activity by the third quarter of 2020. This increase in mobility unfortunately led to renewed transmission of the virus in several countries, placing healthcare systems under significant burden, leading governments to reimpose restrictions on mobility and causing economic activity to decline once more.

Economic forecasts are subject to a high degree of uncertainty in the current environment. Limitations of forecasts and economic models require a greater reliance on management judgement in addressing both the error inherent in economic forecasts and in assessing associated ECL outcomes. The scenarios used to calculate ECL in the *Annual Report and Accounts 2020* are described below.

#### The consensus Central scenario

HSBC's Central scenario features an improvement in economic growth in 2021 as activity and employment gradually return to the levels experienced prior to the outbreak of Covid-19.

Despite the sharp contraction in activity, government support in advanced economies played a crucial role in averting significant financial distress. At the same time, central banks in our key markets implemented a variety of measures, which included lowering their main policy interest rates, implementing emergency support measures for funding markets, and either restarting or increasing quantitative easing programmes in order to support economies and the financial system. Across our key markets, governments and central banks are expected to continue to wo together to ensure that households and firms receive an appropriate level of financial support until restrictions on econo activity and mobility can be materially eased. Such support inte to ensure that labour and housing markets do not experience abrupt, negative corrections and also intends to limit the extent long-term structural damage to economies.

Our Central scenario incorporates expectations that governmen and public health authorities in our key markets will implement large vaccination programmes, first by inoculating critical grour and then increasing coverage to include the wider population. T deployment of mass vaccination programmes marks a significa step forward in combating the virus and will ease the burden or healthcare systems. We expect vaccination programmes across our key markets to contribute positively to recovery prospects a our Central scenario assumes a steady increase in the proportio of the population inoculated against Covid-19 over the course o 2021.

Differences across markets in the speed and scale of economic recovery in the Central scenario reflect timing differences in the progression of the Covid-19 outbreak, national level differences restrictions imposed, the coverage achieved by vaccination programmes and the scale of support measures.

The key features of our Central scenario are:

- Economic activity across our top eight markets will recover i 2021, supported by a successful roll-out of vaccination programmes. We expect vaccination programmes, coupled with effective non-pharmacological measures to contain the virus including 'track and trace' systems and restrictions to mobility, to lead to a significant decline in infections across c key markets by the end of 2021.
- Where government support programmes are available, they continue to provide support to labour markets and househol in 2021. We expect a gradual reversion of the unemploymen rate to pre-crisis levels over the course of the projection peri as a result of economic recovery and due to the orderly withdrawal of government support.
- Inflation will converge towards central bank targets in our ke markets.
- In advanced economies, government support in 2020 led to large deficits and a significant increase in public debt. This support is expected to continue as needed and deficits are expected to reduce gradually over the projection period. Sovereign debt levels will remain high and our Central scena does not assume fiscal austerity.
- Policy interest rates in key markets will remain at current lev for an extended period and will increase very modestly towa the end of our projection period. Central banks will continue provide assistance through their asset purchase programme as needed.
- The West Texas Intermediate oil price is forecast to average $43 per barrel over the projection period.

[27] *HSBC Holdings plc, Annual Report and Accounts 2020*, Risk: Credit risk, pages 127 - 129.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Central scenario.

Central scenario 2021–2025

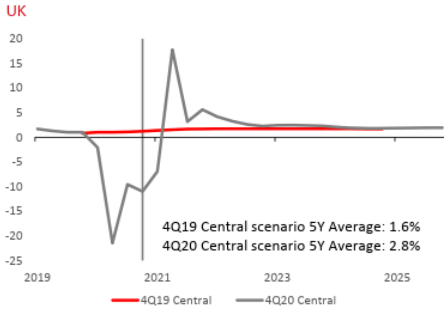
| | UK | US | Hong Kong | Mainland China | Canada | France | UAE | Mexico |
|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % |
| **GDP growth rate** | | | | | | | | |
| 2020: Annual average growth rate | (11.0) | (4.1) | (6.4) | 2.0 | (6.1) | (9.7) | (6.3) | (9.7) |
| 2021: Annual average growth rate | 4.9 | 3.8 | 4.3 | 7.8 | 5.0 | 5.9 | 3.0 | 3.7 |
| 2022: Annual average growth rate | 3.1 | 2.9 | 2.9 | 5.3 | 3.1 | 2.9 | 3.6 | 2.5 |
| 2023: Annual average growth rate | 2.4 | 2.4 | 2.6 | 5.2 | 2.4 | 2.2 | 3.9 | 2.4 |
| 5-year average | 2.8 | 2.7 | 2.9 | 5.6 | 2.9 | 2.9 | 3.4 | 2.6 |
| **Unemployment rate** | | | | | | | | |
| 2020: Annual average rate | 4.6 | 8.3 | 5.8 | 3.9 | 9.6 | 7.9 | 3.1 | 5.4 |
| 2021: Annual average rate | 6.9 | 6.7 | 5.0 | 4.1 | 7.9 | 10.0 | 2.7 | 5.3 |
| 2022: Annual average rate | 5.8 | 5.8 | 3.9 | 4.2 | 6.8 | 9.1 | 2.6 | 4.7 |
| 2023: Annual average rate | 5.4 | 4.9 | 3.8 | 4.1 | 6.5 | 8.8 | 2.7 | 4.5 |
| 5-year average | 5.6 | 5.3 | 4.0 | 4.0 | 6.8 | 9.0 | 2.7 | 4.6 |
| **House price growth** | | | | | | | | |
| 2020: Annual average growth rate | 2.3 | 6.0 | (0.8) | 2.3 | 5.7 | 4.4 | (11.6) | 5.5 |
| 2021: Annual average growth rate | (2.1) | 4.0 | (2.2) | 4.7 | 2.1 | (0.5) | (9.8) | 3.4 |
| 2022: Annual average growth rate | 0.9 | 4.3 | 2.4 | 5.7 | 2.0 | 4.1 | (1.3) | 5.0 |
| 2023: Annual average growth rate | 3.0 | 4.0 | 5.2 | 5.0 | 3.1 | 4.1 | 2.6 | 4.6 |
| 5-year average | 1.9 | 4.0 | 2.3 | 4.7 | 2.7 | 2.8 | – | 4.2 |
| **Short-term interest rate** | | | | | | | | |
| 2020: Annual average rate | 0.3 | 0.7 | 1.2 | 3.2 | 0.8 | (0.4) | 1.0 | 5.7 |
| 2021: Annual average rate | 0.1 | 0.3 | 1.0 | 2.9 | 0.5 | (0.5) | 0.8 | 4.5 |
| 2022: Annual average rate | 0.1 | 0.3 | 1.1 | 3.0 | 0.6 | (0.5) | 0.8 | 4.7 |
| 2023: Annual average rate | 0.1 | 0.4 | 1.2 | 3.1 | 0.8 | (0.5) | 0.9 | 5.2 |
| 5-year average | 0.2 | 0.5 | 1.3 | 3.1 | 0.8 | (0.5) | 1.0 | 5.2 |
| **Probability** | 40 | 65 | 70 | 80 | 70 | 40 | 65 | 65 |

The graphs comparing the respective Central scenarios in the fourth quarters of 2019 and 2020 reveal the extent of economic dislocation that occurred in 2020 and the impact this has had on central projections made at the end of 2019.

The emergent nature of the Covid-19 outbreak at the end of 2019 meant that, consistent with other banks, HSBC's Central scenario did not, on a forward-looking basis, consider the impact of the virus. Our Central scenario at the 2019 year-end projected moderate growth over a five-year horizon, with strong prospects for employment and a gradual increase in policy interest rates by central banks in the major economies of Europe and North America. The onset of the virus led to a fundamental reassessment of our Central forecast and the distribution of risks over the course of 2020. Our Central scenario at the end of 2020, as described above, is based on assumptions that are considerably different.

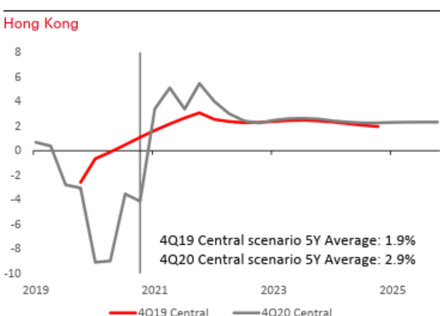
GDP growth: Comparison

UK



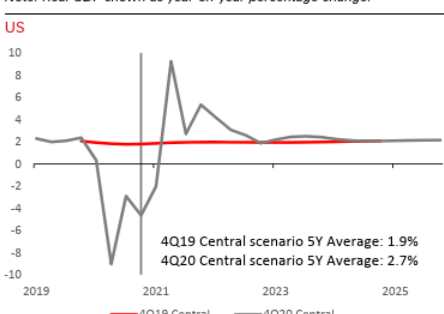

*Note: Real GDP shown as year-on-year percentage change.*

Hong Kong



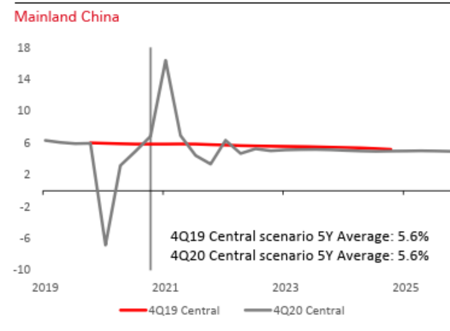

*Note: Real GDP shown as year-on-year percentage change.*

US




*Note: Real GDP shown as year-on-year percentage change.*

Mainland China




*Note: Real GDP shown as year-on-year percentage change.*

The consensus Upside scenario

Compared with the consensus Central scenario, the consensus Upside scenario features a faster recovery in economic activity during the first two years, before converging to long-run trends.

The scenario is consistent with a number of key upside risk themes. These include the orderly and rapid global abatement of Covid-19 via successful containment and prompt deployment of a vaccine; de-escalation of tensions between the US and China; de-escalation of political tensions in Hong Kong; continued support from fiscal and monetary policy and smooth relations between th UK and the EU, which enables the two parties to swiftly reach a comprehensive agreement on trade and services.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Upside scenario.

In its 2020 annual report, NatWest Group provided disclosures (narrative, tabular and graphical) in respect of its economic scenarios, key input values by forecast period and evolution compared to the prior year by main country of operations.

**_Extract 17[28]: NatWest Group, Annual Report and Accounts 2020 - Comparison of key economic loss drivers under various scenarios YE'2020 vs YE'2019_** *United Kingdom*

**Economic loss drivers**

Introduction

The portfolio segmentation and selection of economic loss drivers for IFRS 9 follow closely the approach used in stress testing. To enable robust modelling the forecasting models for each portfolio segment (defined by product or asset class and where relevant, industry sector and region) are based on a selected, small number of economic factors, (typically three to four) that best explain the temporal variations in portfolio loss rates. The process to select economic loss drivers involves empirical analysis and expert judgement.

The most material economic loss drivers for the Personal portfolio include unemployment rates, house price indices and the Bank of England and the European Central Bank base rates. For the Wholesale portfolio, in addition to interest and unemployment rates, national GDP, stock price indices and world GDP are primary loss drivers.

Economic scenarios

As at 31 December 2020, the range of anticipated future economic conditions was defined by a set of four internally developed scenarios and their respective probabilities. They comprised upside, base case, downside and extreme downside scenarios. The scenarios primarily reflect a range of outcomes for the path of COVID-19 and associated effects on labour and asset markets. The scenarios were consistent with the UK-EU Trade and Cooperation Agreement and are summarised as follows:

Upside – This scenario assumes a very strong recovery through 2021, facilitated by a very rapid rollout of the vaccine. Economic output regains its pre-COVID-19 peak by the end of the year. The rebound in consumer spending from an easing in lockdown restrictions is rapid, enabling a more successful reabsorption of furloughed labour compared to the base case. That limits the rise in unemployment. Consequently, the effect on asset prices is more limited compared to the base case.

Base case – The current lockdown restrictions are gradually loosened enabling a recovery over the course of 2021. The rollout of the vaccines proceeds as planned. Consumer spending rebounds as accumulated household savings are spent, providing support to the recovery in consumer-facing service sectors. Unemployment rises through to the second half of 2021, peaking at 7%, before gradually retreating. Housing activity slows in the second half of 2021 with a very limited decline in prices.

Downside – This scenario assumes the rollout of the COVID-19 vaccine is slower compared to base case, leading to a more sluggish recovery. Business confidence is slower to return while households remain more cautious. This scenario assumes that the labour market and asset market damage is greater than in the base case. Unemployment peaks at 9.4%, surpassing the financial crisis peak and causing more scarring.

Extreme downside – This scenario assumes a new variant of COVID-19 necessitates a new vaccine, which substantially slows the speed of rollout, prolonging the recovery. There is a renewed sharp downturn in the economy in 2021. Firms react by shedding labour in significant numbers, leading to a very difficult recovery with the unemployment rate surpassing the levels seen in the 1980s. There are very sharp declines in asset prices. The recovery is tepid throughout the five-year period, meaning only a gradual decline in joblessness.

In contrast, as at 31 December 2019, NatWest Group used five discrete scenarios to characterise the distribution of risks in the economic outlook. For 2020, the four scenarios were deemed appropriate in capturing the uncertainty in economic forecasts and the non-linearity in outcomes under different scenarios. These four scenarios were developed to provide sufficient coverage across potential rises in unemployment, asset price falls and the degree of permanent damage to the economy, around which there are pronounced levels of uncertainty at this stage.

The tables and commentary below provide details of the key economic loss drivers under the four scenarios.

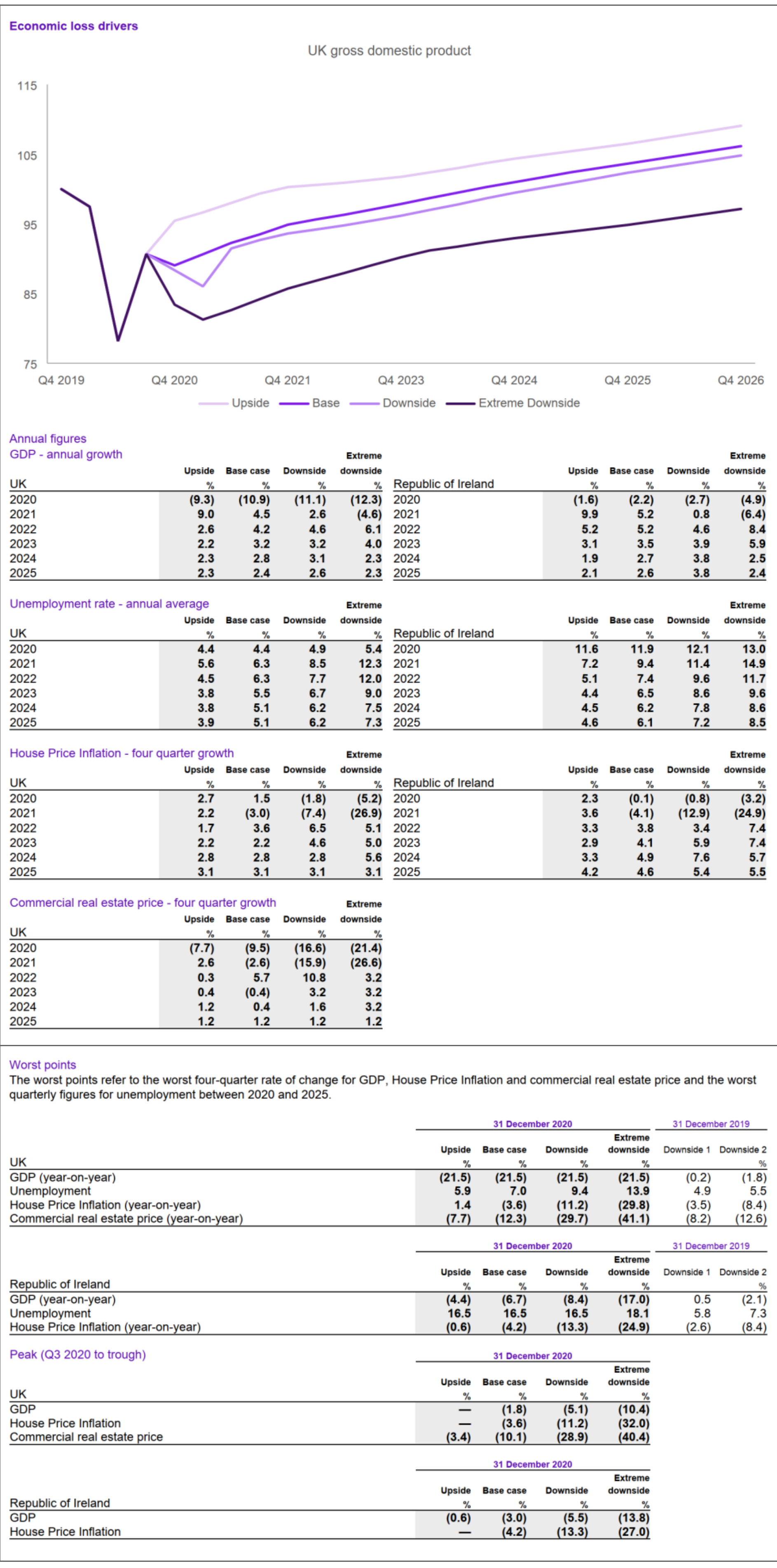
The main macroeconomic variables for each of the four scenarios used for ECL modelling are set out in the main macroeconomic variables table below. The compound annual growth rate (CAGR) for GDP is shown. It also shows the five-year average for unemployment and the Bank of England base rate. The House Price Inflation and commercial real estate figures show the total change in each asset over five years.

Main macroeconomic variables

| | 2020 | | | | 2019 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Upside | Base case | Downside | Extreme downside | Upside 2 | Upside 1 | Base case | Downside 1 | Downside 2 |
| Five-year summary | % | % | % | % | % | % | % | % | % |
| UK | | | | | | | | | |
| GDP - CAGR | **3.6** | **3.1** | **2.8** | **1.3** | 2.5 | 2.3 | 1.6 | 1.3 | 0.9 |
| Unemployment - average | **4.4** | **5.7** | **7.1** | **9.7** | 3.6 | 3.9 | 4.4 | 4.6 | 5.2 |
| House Price Inflation - total change | **12.5** | **7.6** | **4.4** | **(19.0)** | 22.4 | 17.6 | 8.3 | 4.0 | (5.1) |
| Bank of England base rate - average | **0.2** | **—** | **(0.1)** | **(0.5)** | 1.0 | 0.7 | 0.3 | — | — |
| Commercial real estate price - total change | **4.3** | **0.7** | **(12.0)** | **(31.5)** | 13.0 | 8.1 | (1.3) | (5.8) | (15.1) |
| | | | | | | | | | |
| Republic of Ireland | | | | | | | | | |
| GDP - CAGR | **4.2** | **3.5** | **3.0** | **1.6** | 3.8 | 3.5 | 2.7 | 2.3 | 1.8 |
| Unemployment - average | **5.6** | **7.5** | **9.3** | **11.2** | 4.0 | 4.3 | 4.8 | 5.6 | 6.8 |
| House Price Inflation - total change | **21.0** | **13.3** | **6.8** | **(7.0)** | 29.3 | 25.7 | 15.5 | 10.8 | 4.2 |
| European Central Bank base rate - average | **0.1** | **—** | **—** | **—** | 1.5 | 0.8 | — | — | — |
| | | | | | | | | | |
| World GDP - CAGR | **3.5** | **3.4** | **2.9** | **2.8** | 3.9 | 3.3 | 2.8 | 2.5 | 2.0 |
| | | | | | | | | | |
| Probability weight | **20.0** | **40.0** | **30.0** | **10.0** | 12.7 | 14.8 | 30.0 | 29.7 | 12.7 |

Note:
(1) The five year period starts at Q3 2020 for 2020 and Q3 2019 for 2019.

[28] *NatWest Group plc, Annual Report and Accounts 2020*, Capital and risk management: Credit risk - Economic loss drivers, pages 173 – 176.



**Economic loss drivers**



Annual figures

GDP - annual growth

| UK | Upside % | Base case % | Downside % | Extreme downside % |
|---|---|---|---|---|
| 2020 | (9.3) | (10.9) | (11.1) | (12.3) |
| 2021 | 9.0 | 4.5 | 2.6 | (4.6) |
| 2022 | 2.6 | 4.2 | 4.6 | 6.1 |
| 2023 | 2.2 | 3.2 | 3.2 | 4.0 |
| 2024 | 2.3 | 2.8 | 3.1 | 2.3 |
| 2025 | 2.3 | 2.4 | 2.6 | 2.3 |

| Republic of Ireland | Upside % | Base case % | Downside % | Extreme downside % |
|---|---|---|---|---|
| 2020 | (1.6) | (2.2) | (2.7) | (4.9) |
| 2021 | 9.9 | 5.2 | 0.8 | (6.4) |
| 2022 | 5.2 | 5.2 | 4.6 | 8.4 |
| 2023 | 3.1 | 3.5 | 3.9 | 5.9 |
| 2024 | 1.9 | 2.7 | 3.8 | 2.5 |
| 2025 | 2.1 | 2.6 | 3.8 | 2.4 |

Unemployment rate - annual average

| UK | Upside % | Base case % | Downside % | Extreme downside % |
|---|---|---|---|---|
| 2020 | 4.4 | 4.4 | 4.9 | 5.4 |
| 2021 | 5.6 | 6.3 | 8.5 | 12.3 |
| 2022 | 4.5 | 6.3 | 7.7 | 12.0 |
| 2023 | 3.8 | 5.5 | 6.7 | 9.0 |
| 2024 | 3.8 | 5.1 | 6.2 | 7.5 |
| 2025 | 3.9 | 5.1 | 6.2 | 7.3 |

| Republic of Ireland | Upside % | Base case % | Downside % | Extreme downside % |
|---|---|---|---|---|
| 2020 | 11.6 | 11.9 | 12.1 | 13.0 |
| 2021 | 7.2 | 9.4 | 11.4 | 14.9 |
| 2022 | 5.1 | 7.4 | 9.6 | 11.7 |
| 2023 | 4.4 | 6.5 | 8.6 | 9.6 |
| 2024 | 4.5 | 6.2 | 7.8 | 8.6 |
| 2025 | 4.6 | 6.1 | 7.2 | 8.5 |

House Price Inflation - four quarter growth

| UK | Upside % | Base case % | Downside % | Extreme downside % |
|---|---|---|---|---|
| 2020 | 2.7 | 1.5 | (1.8) | (5.2) |
| 2021 | 2.2 | (3.0) | (7.4) | (26.9) |
| 2022 | 1.7 | 3.6 | 6.5 | 5.1 |
| 2023 | 2.2 | 2.2 | 4.6 | 5.0 |
| 2024 | 2.8 | 2.8 | 2.8 | 5.6 |
| 2025 | 3.1 | 3.1 | 3.1 | 3.1 |

| Republic of Ireland | Upside % | Base case % | Downside % | Extreme downside % |
|---|---|---|---|---|
| 2020 | 2.3 | (0.1) | (0.8) | (3.2) |
| 2021 | 3.6 | (4.1) | (12.9) | (24.9) |
| 2022 | 3.3 | 3.8 | 3.4 | 7.4 |
| 2023 | 2.9 | 4.1 | 5.9 | 7.4 |
| 2024 | 3.3 | 4.9 | 7.6 | 5.7 |
| 2025 | 4.2 | 4.6 | 5.4 | 5.5 |

Commercial real estate price - four quarter growth

| UK | Upside % | Base case % | Downside % | Extreme downside % |
|---|---|---|---|---|
| 2020 | (7.7) | (9.5) | (16.6) | (21.4) |
| 2021 | 2.6 | (2.6) | (15.9) | (26.6) |
| 2022 | 0.3 | 5.7 | 10.8 | 3.2 |
| 2023 | 0.4 | (0.4) | 3.2 | 3.2 |
| 2024 | 1.2 | 0.4 | 1.6 | 3.2 |
| 2025 | 1.2 | 1.2 | 1.2 | 1.2 |

Worst points

The worst points refer to the worst four-quarter rate of change for GDP, House Price Inflation and commercial real estate price and the worst quarterly figures for unemployment between 2020 and 2025.

| | 31 December 2020 | | | | 31 December 2019 | |
|---|---|---|---|---|---|---|
| UK | Upside % | Base case % | Downside % | Extreme downside % | Downside 1 | Downside 2 % |
| GDP (year-on-year) | (21.5) | (21.5) | (21.5) | (21.5) | (0.2) | (1.8) |
| Unemployment | 5.9 | 7.0 | 9.4 | 13.9 | 4.9 | 5.5 |
| House Price Inflation (year-on-year) | 1.4 | (3.6) | (11.2) | (29.8) | (3.5) | (8.4) |
| Commercial real estate price (year-on-year) | (7.7) | (12.3) | (29.7) | (41.1) | (8.2) | (12.6) |

| | 31 December 2020 | | | | 31 December 2019 | |
|---|---|---|---|---|---|---|
| Republic of Ireland | Upside % | Base case % | Downside % | Extreme downside % | Downside 1 | Downside 2 % |
| GDP (year-on-year) | (4.4) | (6.7) | (8.4) | (17.0) | 0.5 | (2.1) |
| Unemployment | 16.5 | 16.5 | 16.5 | 18.1 | 5.8 | 7.3 |
| House Price Inflation (year-on-year) | (0.6) | (4.2) | (13.3) | (24.9) | (2.6) | (8.4) |

Peak (Q3 2020 to trough)

| | 31 December 2020 | | | |
|---|---|---|---|---|
| UK | Upside % | Base case % | Downside % | Extreme downside % |
| GDP | — | (1.8) | (5.1) | (10.4) |
| House Price Inflation | — | (3.6) | (11.2) | (32.0) |
| Commercial real estate price | (3.4) | (10.1) | (28.9) | (40.4) |

| | 31 December 2020 | | | |
|---|---|---|---|---|
| Republic of Ireland | Upside % | Base case % | Downside % | Extreme downside % |
| GDP | (0.6) | (3.0) | (5.5) | (13.8) |
| House Price Inflation | — | (4.2) | (13.3) | (27.0) |

**Credit risk** continued

**Economic loss drivers**

Probability weightings of scenarios

NatWest Group's approach to IFRS 9 multiple economic scenarios (MES) involves selecting a suitable set of discrete scenarios to characterise the distribution of risks in the economic outlook and assigning appropriate probability weights. The scale of the economic impact of COVID-19 and the range of recovery paths necessitates a change of approach to assigning probability weights from that used in recent updates. Previously GDP paths for NatWest Group's scenarios were compared against a set of 1,000 model runs, following which a percentile in the distribution was established that most closely corresponded to the scenario. This approach does not produce meaningful outcomes in the current circumstances because GDP is highly volatile and highly uncertain.

Instead, NatWest Group has subjectively applied probability weights, reflecting expert views within NatWest Group. The probability weight assignment was judged to present good coverage to the central scenarios and the potential for a far more robust recovery on the upside and exceptionally challenging outcomes on the downside. A 20% weighting was applied to the upside scenario, a 40% weighting applied to the base case scenario, a 30% weighting applied to the downside scenario and a 10% weighting applied to the extreme downside scenario. NatWest Group judged a downside-biased weighting as appropriate given the risk to the outlook posed by the numerous factors influencing the path of COVID-19, the rollout of the vaccine and the pace at which social distancing restrictions can be relaxed.

Use of the scenarios in Personal lending

Personal lending follows a discrete scenario approach which means that for each account, PD and LGD values are calculated as probability weighted averages across the individual, discrete economic scenarios. The PD values for each discrete scenario are in turn calculated using product specific econometric models that aggregate forecasts of the relevant economic loss drivers into forecasts of the exogenous component of the respective PD models (refer to IFRS 9 ECL model design principles).

Use of the scenarios in Wholesale lending

The Wholesale lending methodology is based on the concept of CCIs. The CCIs represent, similar to the exogenous component in Personal, all relevant economic loss drivers for a region/industry segment aggregated into a single index value that describes the loss rate conditions in the respective segment relative to its long-run average. A CCI value of zero corresponds to loss rates at long-run average levels, a positive CCI value corresponds to loss rates below long-run average levels and a negative CCI value corresponds to loss rates above long-run average levels.

The four economic scenarios are translated into forward-looking projections of CCIs using a set of econometric models. Subsequently the CCI projections for the individual scenarios are averaged into a single central CCI projection according to the given scenario probabilities. The central CCI projection is then overlaid with an additional mean reversion assumption, i.e. that after one to two years into the forecast horizon the CCI gradually revert to their long-run average of zero.

Finally, ECL is calculated using a Monte Carlo approach by averaging PD and LGD values arising from many CCI paths simulated around the central CCI projection.

The rationale for the Wholesale approach is the long-standing observation that loss rates in Wholesale portfolios tend to follow regular cycles. This allows NatWest Group to enrich the range and depth of future economic conditions embedded in the final ECL beyond what would be obtained from using the discrete macro-economic scenarios alone.

Business banking, while part of the Wholesale segment, for reporting purposes, utilises the Personal lending rather than the Wholesale lending methodology.

**UK economic uncertainty**

Treatment of COVID-19 relief mechanisms

Use of COVID-19 relief mechanisms (for example, payment holidays, CBILS and BBLS) will not automatically merit identification of SICR and trigger a Stage 2 classification in isolation. However, a subset of Personal customers who had accessed payment holiday support, and where their risk profile was identified as relatively high risk were collectively migrated to Stage 2 (if not already captured by other SICR criteria).

For Wholesale customers, NatWest Group continues to provide support, where appropriate, to existing customers. Those who are deemed either (a) to require a prolonged timescale to return to within NatWest Group's risk appetite, (b) not to have been viable pre-COVID-19, or (c) not to be able to sustain their debt once COVID-19 is over, will trigger a SICR and, if concessions are sought, be categorised as forborne, in line with regulatory guidance.

As some of the government support mechanisms conclude, NatWest Group anticipates further credit deterioration in the portfolios. There are a number of key factors that could drive further downside to impairments, through deteriorating economic and credit metrics and increased stage migration as credit risk increases for more customers. A key factor would be a more adverse deterioration in GDP and unemployment in the economies in which NatWest Group operates, but also, among others:

- The timing and nature of governmental exit plans from lockdown, notably in the UK and the Republic of Ireland, and any future repeated lockdown requirements.
- The progress of COVID-19, with potential for changes in worker/consumer behaviour and sickness levels.
- The efficacy of the various government support initiatives in terms of their ability to defray customer defaults is yet to be proven, notably over an extended period.
- Any further damage to certain supply chains, most notably in the case of any re-tightening of lockdown rules but also delays caused by social distancing measures and possible export/import controls.
- The level of revenues lost by corporate clients and pace of recovery of those revenues may affect NatWest Group's clients' ability to service their borrowing, especially in those sectors most exposed to the impacts of COVID-19.
- Higher unemployment if companies fail to restart jobs after periods of staff furlough.

This could potentially lead to further ECL increases. However, the income statement impact of this will be mitigated to some extent by the forward-looking provisions taken as at 31 December 2020.

In its 2020 consolidated financial statements, Société Générale Group provided a description of its macroeconomic scenarios, a graphical illustration of its GDP forecast for the relevant periods and the weightings used for the current and comparative periods.

***Extract 18[29]: Société Générale, Consolidated Financial Statements 2020 – Macroeconomic scenarios: GDP forecast as a key input*** *France*

**DEFINITION OF NEW MACROECONOMIC SCENARIOS**

To prepare its financial statements, the Group uses macroeconomic scenarios in the expected credit losses measurement models including forward-looking data (see Note 3.8).

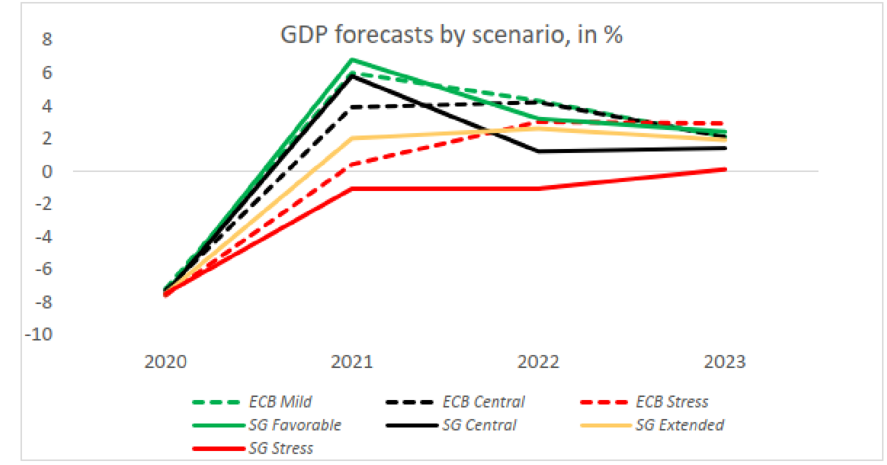
These scenarios are developed by the Societe Generale Department of Economic and Sector Studies for all the Group entities. A weighting ratio is attributed to each scenario and the outputs from the models correspond to a weighted average of these scenarios.

In the second quarter 2020, the Group developed four new macro-economic scenarios to better reflect the impacts and uncertainties generated by the Covid-19 crisis.

On 31 December 2020, the Group maintained the coexistence of four scenarios owing to a still high level of uncertainty, and adjusted them to reflect the perspectives at that date:

- the central scenario (SG Central) expects, after a significant fall in GDP in the countries where the Group has been operating in 2020, a gradual rebound from 2021, considering that the travel restrictions measures will be lifted by the beginning of 2022;
- a scenario of prolonged health crisis (SG Extended) expects that the travel restrictions measures will be lifted by the beginning of 2023;
- lastly, two scenarios, one favourable and one stress supplement these two scenarios. These two last scenarios are less severe as at 30 June 2020 owing to a better controlled environment due by strengthening support measures.

The illustration below compares the GDP previsions in the Euro area used by the Group for each scenario with the previsions provided by ECB in December 2020. By the end of 2021, the scenarios adopted by the Group are within the range of the ECB scenarios.




WEIGHTING OF THE MACROECONOMIC SCENARIOS

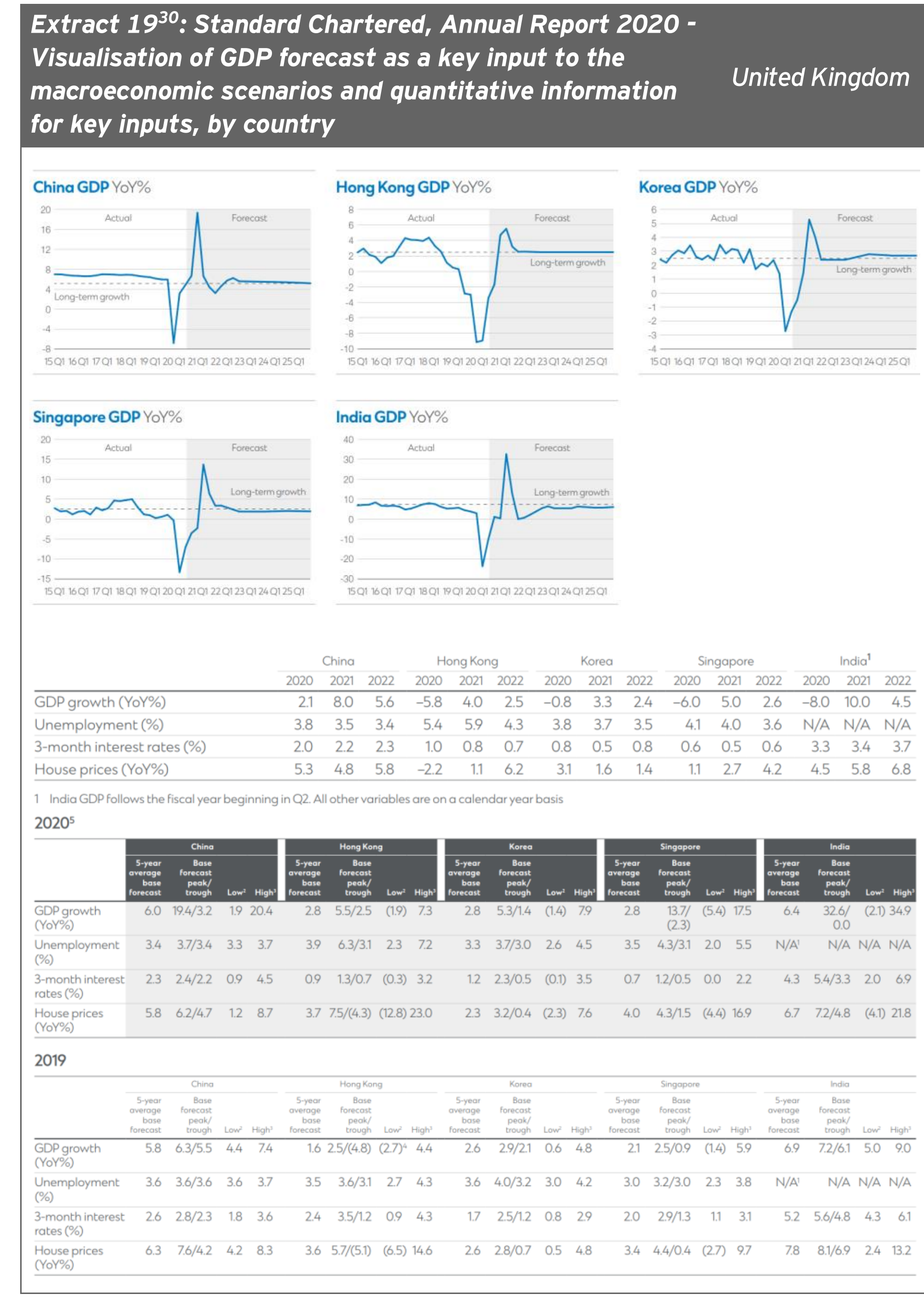
On 31 December 2020, the SG Central scenario has been updated as described in the "Definition of macroeconomic parameters" paragraph. The analysis of the consequences of the first lockdown and the proposed governmental support measures has enabled the Groupe, as part of the annual budget process, to review the SG Central scenario. Thus, the SG Central scenario takes into account more precisely the uncertainties related to COVID19 crisis and its future consequences.

Presentation of the changes in weighting:

| | 31 December 2019 | 30 June 2020 | 31 December 2020 |
|---|---|---|---|
| SG Central | 74% | 65% | 65% |
| SG Extended | - | 25% | 10% |
| SG Stress | 16% | 5% | 15% |
| SG Favourable | 10% | 5% | 10% |

[29] *Société Générale Group, Consolidated Financial Statements 31.12.2020*, Note 1 – Significant Accounting Principles, Section 5: COVID-19, pages 13 and 15.

In its 2020 annual report, Standard Chartered provided graphical illustrations and tabular disclosures in respect of key inputs to its macroeconomic scenarios – GDP, unemployment, HPI - by main country of operations.




***Extract 19[30]: Standard Chartered, Annual Report 2020 - Visualisation of GDP forecast as a key input to the macroeconomic scenarios and quantitative information for key inputs, by country***

*United Kingdom*

| | China | | | Hong Kong | | | Korea | | | Singapore | | | India[1] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2020 | 2021 | 2022 | 2020 | 2021 | 2022 | 2020 | 2021 | 2022 | 2020 | 2021 | 2022 |
| GDP growth (YoY%) | 2.1 | 8.0 | 5.6 | –5.8 | 4.0 | 2.5 | –0.8 | 3.3 | 2.4 | –6.0 | 5.0 | 2.6 | –8.0 | 10.0 | 4.5 |
| Unemployment (%) | 3.8 | 3.5 | 3.4 | 5.4 | 5.9 | 4.3 | 3.8 | 3.7 | 3.5 | 4.1 | 4.0 | 3.6 | N/A | N/A | N/A |
| 3-month interest rates (%) | 2.0 | 2.2 | 2.3 | 1.0 | 0.8 | 0.7 | 0.8 | 0.5 | 0.8 | 0.6 | 0.5 | 0.6 | 3.3 | 3.4 | 3.7 |
| House prices (YoY%) | 5.3 | 4.8 | 5.8 | –2.2 | 1.1 | 6.2 | 3.1 | 1.6 | 1.4 | 1.1 | 2.7 | 4.2 | 4.5 | 5.8 | 6.8 |

1 India GDP follows the fiscal year beginning in Q2. All other variables are on a calendar year basis

**2020[5]**

| | China | | | | Hong Kong | | | | Korea | | | | Singapore | | | | India | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] |
| GDP growth (YoY%) | 6.0 | 19.4/3.2 | 1.9 | 20.4 | 2.8 | 5.5/2.5 | (1.9) | 7.3 | 2.8 | 5.3/1.4 | (1.4) | 7.9 | 2.8 | 13.7/ (2.3) | (5.4) | 17.5 | 6.4 | 32.6/ 0.0 | (2.1) | 34.9 |
| Unemployment (%) | 3.4 | 3.7/3.4 | 3.3 | 3.7 | 3.9 | 6.3/3.1 | 2.3 | 7.2 | 3.3 | 3.7/3.0 | 2.6 | 4.5 | 3.5 | 4.3/3.1 | 2.0 | 5.5 | N/A[1] | N/A | N/A | N/A |
| 3-month interest rates (%) | 2.3 | 2.4/2.2 | 0.9 | 4.5 | 0.9 | 1.3/0.7 | (0.3) | 3.2 | 1.2 | 2.3/0.5 | (0.1) | 3.5 | 0.7 | 1.2/0.5 | 0.0 | 2.2 | 4.3 | 5.4/3.3 | 2.0 | 6.9 |
| House prices (YoY%) | 5.8 | 6.2/4.7 | 1.2 | 8.7 | 3.7 | 7.5/(4.3) | (12.8) | 23.0 | 2.3 | 3.2/0.4 | (2.3) | 7.6 | 4.0 | 4.3/1.5 | (4.4) | 16.9 | 6.7 | 7.2/4.8 | (4.1) | 21.8 |

**2019**

| | China | | | | Hong Kong | | | | Korea | | | | Singapore | | | | India | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] | 5-year average base forecast | Base forecast peak/ trough | Low[2] | High[3] |
| GDP growth (YoY%) | 5.8 | 6.3/5.5 | 4.4 | 7.4 | 1.6 | 2.5/(4.8) | (2.7)[4] | 4.4 | 2.6 | 2.9/2.1 | 0.6 | 4.8 | 2.1 | 2.5/0.9 | (1.4) | 5.9 | 6.9 | 7.2/6.1 | 5.0 | 9.0 |
| Unemployment (%) | 3.6 | 3.6/3.6 | 3.6 | 3.7 | 3.5 | 3.6/3.1 | 2.7 | 4.3 | 3.6 | 4.0/3.2 | 3.0 | 4.2 | 3.0 | 3.2/3.0 | 2.3 | 3.8 | N/A[1] | N/A | N/A | N/A |
| 3-month interest rates (%) | 2.6 | 2.8/2.3 | 1.8 | 3.6 | 2.4 | 3.5/1.2 | 0.9 | 4.3 | 1.7 | 2.5/1.2 | 0.8 | 2.9 | 2.0 | 2.9/1.3 | 1.1 | 3.1 | 5.2 | 5.6/4.8 | 4.3 | 6.1 |
| House prices (YoY%) | 6.3 | 7.6/4.2 | 4.2 | 8.3 | 3.6 | 5.7/(5.1) | (6.5) | 14.6 | 2.6 | 2.8/0.7 | 0.5 | 4.8 | 3.4 | 4.4/0.4 | (2.7) | 9.7 | 7.8 | 8.1/6.9 | 2.4 | 13.2 |

[30] *Standard Chartered PLC, Annual Report 2020*, Risk review, Risk profile, IFRS 9 methodology (audited) Results Presentation, 30 July 2020, pages 226-227.

A number of banks have provided additional quantitative and qualitative disclosures in respect of overlays and post-model adjustments in their ECL provision. However, there was diversity in practise in relation to the granularity of the disclosure as well as the accompanying narrative and supporting analysis.

## 4. Overlays and model adjustments

### What we expected

Given the degree of uncertainty surrounding the economic impact of COVID-19 and the lack of reliable data to model the impact on the banking book, as well as the operational and timing challenges in incorporating the latest available macroeconomic inputs into the ECL models, it was expected that banks would include overlays and model adjustments in their ECL provision.

Model adjustments could be 'in-model' adjustments, for example the addition of a value check for a specific parameter within a model to reflect expert judgement on a maximum / minimum possible value or 'post-model' adjustments, for example adjustments to the modelled ECL to reflect the impact of customer support schemes that were not fully incorporated within the relevant models.

To promote consistency and enable comparability of the ECL estimate in those instances, we would have expected banks to provide additional quantitative and qualitative disclosures.

The disclosures banks should have considered presenting included the following, where relevant:

- An explanation of the nature of the adjustments and how these were calculated for each material overlay and 'in' or 'post' model adjustment
- The reasons for the adjustment, specifically what risks it addresses, including whether it was made to incorporate scenarios that could not be modelled without undue cost or effort (for example, to incorporate the impact of certain forms of government support or to include the most recent macroeconomic information available), to address model limitations (for example, the fact that the model results were based on outdated correlations or assumptions), adjust the expected increase in delinquency currently concealed by moratoria or reflect increased sectorial idiosyncrasies
- Quantitative analysis, including, as a minimum, the absolute size of the adjustment, the overall effect on the ECL estimate resulting from it, especially if materially changed compared to the last year-end. Alternatively, the impact could be disclosed as a percentage of the overall ECL

Further examples of additional disclosures banks could have considered providing where relevant included the following:

- The impact of the adjustment on staging
- What governance has been in place
- What specific customer segment, product type and geographical region the adjustment covers, including a breakdown of the ECL for each asset class, geographical and/or operating segment
- Whether the adjustment relates to a specific impairment stage
- Movements in the adjustments compared to the previous financial year should be explained

## What we observed

As expected, overlays and model adjustments gained in prominence in 2020 given the unprecedented circumstances experienced. The main reasons can be summarised, as follows:

- Model deficiencies: models were operating outside the boundaries of the data used to calibrate them, for example, a number of banks referred to models providing unrealistically high default rates. Consequently, banks had to book very significant adjustments in order to estimate the losses expected in this crisis.
- The historical correlation between GDP and other key economic variables and future losses was built without considering the effect of government and similar support measures. As such, adjustments were needed for this effect and there was significant diversity in practice. Loans are expected to perform better, thanks to support measures. At the same time, support measures may have a delaying effect on default, which could lead to a wave of defaults when they are withdrawn. As a result, banks have to strike a difficult balance between these two effects.
- Finally, sector idiosyncrasies were amplified by the crisis and adjustments were applied in order to have an appropriate differentiation in the severity of projected default rates for different industry sectors.

A number of banks have provided additional quantitative and qualitative disclosures in respect of overlays and post-model adjustments in their ECL provision, which ranged from detailed information, including the impact on different portfolios, to narrative only. We note further diversity in relation to the accompanying narrative explanations and supporting analysis.

We further observed that most banks provided disclosures in respect of 'post-model' adjustments while almost no disclosures were provided for 'in-model' adjustments, which is an area for which we would expect to see more information provided in the future.

Based on disclosures provided, the total of the post-model adjustments and management overlays, both in absolute terms and in terms of their proportion to the total of Stage 1 and Stage 2 ECL allowance, was significant.

We note that some banks have not used overlays, but have, instead, adapted the macroeconomic parameters of their models in order to reflect the medium-term impacts on the macroeconomic environment and thus minimise excessive short-term volatility. A more limited use of overlays may also reflect a higher level of expert judgement in the risk assessment of borrowers and other components of the IFRS 9 designed implementation.

## How we see it

As noted above, a number of banks provided quantitative and qualitative information in respect of post-model adjustments and management overlays while others merely mentioned that total ECL included these elements without providing further analysis.

Disclosures provided were rather diverse with some banks breaking down these elements into the segments / portfolios / products they related to, while others referred to them without providing a numerical analysis or merely providing a total.

As noted in *Section 5 Sensitivity analysis* below, banks did not use a consistent approach as to how these adjustments were treated in the sensitivity analysis disclosures provided.

Going forward, given the significant size of the model adjustments and management overlays, we would still expect increased transparency and granularity in the relevant disclosures. Such disclosures should be sufficiently detailed and clear for the users of the financial statements to understand.

Examples of disclosures that banks could consider providing (or maintaining) going forward include, but are not limited to, the following:

- Rationale for the overlay and model adjustments, estimation approach (specific assumptions and judgements used), and current impact
- Allocation by product, business segment and type of overlay (model adjustments due to models working outside historical observations, uncertainty overlays, sector related overlays, etc.), highlighting possible offsetting effects between different types of overlays (for example, between an overlay applied for potential default suppression due to government support schemes and an overlay applied to adjust probabilities of default (PDs) when models were working outside historical observations)
- Movements in overlays: changes compared to prior periods, narrative to explain the movements and expectations on timing of withdrawal going forward

## Examples

In its 2020 annual report, Barclays PLC provided disclosures in respect of management adjustments made to its impairment models by portfolio, including explanatory narrative.

***Extract 20[31]: Barclays PLC, Annual Report 2020 – Management adjustments to models for impairment*** *United Kingdom*

### Management adjustments to models for impairment (audited)

Management adjustments to impairment models are applied in order to factor in certain conditions or changes in policy that are not fully incorporated into the impairment models, or to reflect additional facts and circumstances at the period end. Management adjustments are reviewed and incorporatec into future model development where applicable.

Total management adjustments to impairment allowance are presented by product below.

**Management adjustments to models for impairment (audited)[a]**

| | 2020 | | 2019 | |
|---|---|---|---|---|
| **As at 31 December** | **Management adjustments to impairment allowances £m** | **Proportion of total impairment allowances %** | Management adjustments to impairment allowances £m | Proportion of total impairment allowances % |
| Home loans | **131** | **24.3** | 57 | 13.2 |
| Credit cards, unsecured loans and other retail lending | **1,234** | **20.3** | 308 | 6.2 |
| Wholesale loans | **23** | **0.8** | (25) | (2.1 |
| **Total** | **1,388** | **14.8** | 340 | 5.1 |

**Management adjustments to models for impairment charges (audited)[a]**

| **As at 31 December 2020** | **Impairment allowance pre management adjustments[c] £m** | **Economic uncertainty adjustments £m** | **Other adjustments £m** | **Total impairment allowance £m** |
|---|---|---|---|---|
| Home loans | **407** | **21** | **110** | **538** |
| Credit cards, unsecured loans and other retail lending | **4,849** | **1,625** | **(391)** | **6,083** |
| Wholesale loans | **2,755** | **421** | **(398)** | **2,778** |
| **Total** | **8,011** | **2,067** | **(679)** | **9,399** |

**Notes**

a Positive values relate to an increase in impairment allowance.

b The 2019 comparative figures have been restated to include impairment allowance on both drawn and undrawn exposures.

c Includes £6.8bn of modelled ECL, £0.9bn of individually assessed impairments and £0.3bn ECL from non-modelled exposures.

#### Economic uncertainty adjustments

The pandemic impacted the global economy throughout 2020 and macroeconomic forecasts indicate longer-term impacts will result in higher unemployment levels and consumer and client stress. However, to date, little real credit deterioration has occurred, largely as a result of government and bank support. Observed 30-day arrears rates in consumer loans in particular have remained stable in both US cards (2020: 2.5%; 2019: 2.7%) and UK cards (2020: 1.7%; 2019: 1.7%). A similar phenomenon is observed in wholesale, where the average risk profile of the portfolio has broadly remained stable during the year and has not deteriorated in line with the macroeconomic crisis.

Given this backdrop, management has applied COVID-19 specific adjustments to modelled outputs to ensure the full potential impacts of stress are provided for. These adjustments address the temporary nature of ongoing government support, the uncertainty in relation to the timing of stress and the degree to which economic consensus has not yet captured the range of economic uncertainty.

The COVID-19 adjustments of £2.1bn broadly comprised the following:

- Use of expert judgement to adjust the probability of default £0.7bn to pre-COVID levels to reflect the impact of temporary support measures on underlying customer behaviour, partially offset by government guarantees £(0.1)bn which are materially against BBLs;
- Adjusting macroeconomic variables deemed temporarily influenced by support measures, enabling models to consume the expected stress £1.2bn;
- A £0.3bn adjustment has been applied to selected sectors in Stage 1 to increase the ECL coverage on these names in line with the average Stage 2 coverage. This adjustment is materially in response to the increased stress in these sectors not captured through the ECL models.

#### Other adjustments

**Home loans:** The low average LTV nature of the UK Home Loans portfolio means that modelled ECL estimates are low in all but the most severe economic scenarios. An adjustment is held to maintain an appropriate level of ECL.

**Credit cards, unsecured loans and other retail lending:** Includes a net release in ECL of £0.6bn due to a reclassification of £2bn gross loans and advances from Stage 2 to Stage 1 in credit cards and unsecured loans. The reclassification followed a review of back-testing of results which indicated that origination probability of default characteristics were unnecessarily moving Stage 1 accounts into Stage 2.

**Wholesale loans:** Adjustments include a release in the Investment Bank to limit excessive ECL sensitivity to the macroeconomic variable for Federal Tax Receipts and a correction to Corporate and Investment Bank ECL to adjust for model inaccuracies informed by back-testing.

Management adjustments of £340m in 2019 largely comprises a £210m PMA to compensate for over-recovery of debt in UK unsecured lending, and subsequently fixed within the underlying model; and £150m for UK economic uncertainty, now subsumed within managements broader approach to economic uncertainty.

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31 *Barclays PLC, Annual Report 2020*, Risk Management, Credit Risk, page 180.

In its 2020 annual report, HSBC Holdings plc provided disclosures in respect of management judgemental adjustments made to its impairment models by portfolio and type of adjustment, including detailed explanatory narrative for each type of adjustment presented.

**Extract 21[32]: HSBC Holdings plc, Annual Report 2020, Management judgemental adjustments** — United Kingdom

**Management judgemental adjustments**

In the context of IFRS 9, management judgemental adjustments are short-term increases or decreases to the ECL at either a customer or portfolio level to account for late-breaking events, model and data limitations and deficiencies, and expert credit judgement applied following management review and challenge. In the *Annual Report and Accounts 2019*, these were 'Post-model adjustments'.

The most severe projections at 31 December 2020 of macroeconomic variables are outside the historical observations on which IFRS 9 models have been built and calibrated to operate Moreover, the complexities of country-specific governmental support programmes, the impacts on customer behaviours and the unpredictable pathways of the pandemic have never been modelled. Consequently, HSBC's IFRS 9 models, in some cases, generate outputs that appear overly sensitive when compared with other economic and credit metrics. Governmental support programmes and customer payment reliefs have dislocated the correlation between economic conditions and defaults on which models are based. Management judgemental adjustments are required to help ensure that an appropriate amount of ECL impairment is recognised.

We have internal governance in place to regularly monitor management judgemental adjustments and, where possible, to reduce the reliance on these through model recalibration or redevelopment, as appropriate. During 2020 the composition of modelled ECL and management judgemental adjustments changed significantly, reflecting the path of the pandemic, containment efforts and government support measures, and this is expected to continue to be the case until economic conditions improve. Wider-ranging model changes will take time to develop and need observable loss data on which models can be developed. Models will be revisited over time once the longer-term impacts of Covid-19 are observed. Therefore, we anticipate significant management judgemental adjustments for the foreseeable future.

Management judgemental adjustments made in estimating the reported ECL at 31 December 2020 are set out in the following table. The table includes adjustments in relation to data and model limitations resulting from the pandemic, and as a result of the regular process of model development and implementation. It shows the adjustments applicable to the scenario-weighted ECL numbers. Adjustments in relation to Downside scenarios are more significant, as results are subject to greater uncertainty.

Management judgemental adjustments to ECL[1]

| | Retail | Wholesale | Total |
|---|---|---|---|
| | $bn | $bn | $bn |
| Low-risk counterparties (banks, sovereigns and government entities) | – | (0.7) | (0.7) |
| Corporate lending adjustments | – | 0.5 | 0.5 |
| Retail lending PD adjustments | (0.8) | | (0.8) |
| Retail model default suppression adjustment | 1.9 | – | 1.9 |
| Other retail lending adjustments | 0.4 | – | 0.4 |
| **Total** | **1.5** | **(0.2)** | **1.3** |

1 *Management judgemental adjustments presented in the table reflect increases or (decreases) to ECL, respectively.*

[32] *HSBC Holdings plc Annual Report and Accounts 2020*, Measurement uncertainty and sensitivity analysis of ECL estimates (Audited), pages 131-132.

Management judgemental adjustments at 31 December 2019 were an increase to ECL of $75m for the wholesale portfolio and $131m for the retail portfolio. This excludes adjustments for alternative scenarios.

During 2020, management judgemental adjustments reflected the volatile economic conditions associated with the Covid-19 pandemic. The composition of modelled ECL and management judgemental adjustments changed significantly over 2020 as certain economic measures, such as GDP growth rate, passed the expected low point in a number of key markets and returned towards those reflected in modelled relationships, subject to continued uncertainty in the recovery paths of different economies.

At 31 December 2020, wholesale management judgemental adjustments were an ECL reduction of $0.2bn (31 December 2019: $0.1bn increase). These wholesale adjustments were lower than those made in the second and third quarters of 2020 following an improvement in macroeconomic assumptions, with models operating closer to their calibration range and following recalibration for stressed conditions.

The adjustments relating to low-credit-risk exposures are mainly to highly rated banks, sovereigns and US government-sponsored entities, where modelled credit factors did not fully reflect the underlying fundamentals of these entities or the effect of government support and economic programmes in the Covid-19 environment.

Adjustments to corporate exposures principally reflect the outcome of management judgements for high-risk and vulnerable sectors in some of our key markets, supported by credit experts' input, quantitative analyses and benchmarks. Considerations include potential default suppression in some sectors due to government intervention and late-breaking idiosyncratic developments.

In the fourth quarter of 2020, retail management judgemental adjustments led to an ECL increase of $1.5bn, primarily from additional ECL of $1.9bn to reflect adjustments to the timing of default, which has been delayed by government support and customer relief measures. This was partly offset by adjustments to retail lending PD outputs, to reduce ECL of $0.8bn for unintuitive model responses, primarily where economic forecasts were beyond the bounds of the model development period. Other retail lending adjustments of $0.4bn led to an increase in ECL from areas such as customer relief and data limitations.

The retail model default suppression adjustment was applied as defaults remain temporarily suppressed due to government support and customer relief programmes, which have supported stabilised portfolio performance. Retail models are reliant on the assumption that as macroeconomic conditions deteriorate, defaults will crystallise. This adjustment aligns the increase in default due to changes in economic conditions to the period of time when defaults are expected to be observed. The retail model default suppression adjustment will be monitored and updated prospectively to ensure appropriate alignment with expected performance taking into consideration the levels and timing of government support and customer relief programmes.

Retail lending PD adjustments are primarily related to an adjustment made in relation to the UK. The downside unemployment forecasts were outside the historical bounds on which the model was developed resulting in unintuitive levels of PD. This adjustment reduced the sensitivity of PD to better align with the historical correlation between changes in levels of unemployment and defaults.

In its 2020 annual report, Lloyds Banking Group PLC provided disclosures in respect of judgemental adjustments made by management to its modelled ECL by portfolio, including explanatory narrative for each type of adjustment.

***Extract 22[33]: Lloyds Banking Group, Annual Results 2020 – Post-model adjustments*** *United Kingdom*

**Application of judgement in adjustments to modelled ECL**

Impairment models fall within the Group's Model Risk framework with model monitoring, periodic validation and back testing performed on model components (i.e. probability of default, exposure at default and loss given default). Limitations in the Group's impairment models or data inputs, may be identified through the ongoing assessment and validation of the output of the models. In these circumstances, management make appropriate adjustments to the Group's allowance for impairment losses to ensure that the overall provision adequately reflects all material risks. These adjustments are determined by considering the particular attributes of exposures which have not been adequately captured by the impairment models and range from changes to model inputs and parameters, at account level, through to more qualitative post-model overlays.

Judgements are not typically assessed under each distinct economic scenario used to generate ECL, but instead are applied on the basis of final modelled ECL which reflects the probability weighted view of all scenarios. All adjustments are reviewed quarterly and are subject to internal review and challenge, including by the Audit Committee, to ensure that amounts are appropriately calculated and that there are specific release criteria within a reasonable timeframe.

At 31 December 2020 the coronavirus pandemic and the various support measures that have been put in place have resulted in an economic environment which differs significantly from the historical economic conditions upon which the impairment models have been built. As a result there is a greater need for management judgements to be applied alongside the use of models. At 31 December 2020 management judgement resulted in additional ECL allowances totalling £1,383 million (2019: £153 million). This comprises judgements added due to COVID-19 in the year and other judgements not directly linked to COVID-19 but which have increased in size under the current outlook. The table below analyses total ECL allowance at 31 December 2020 by portfolio, separately identifying the amounts that have been modelled, those that have been individually assessed and those arising through the application of management judgement.

| | Modelled ECL £m | Individually assessed £m | Judgements due to COVID-19[1] £m | Other judgements £m | Total ECL £m |
|---|---|---|---|---|---|
| **At 31 December 2020** | | | | | |
| UK Mortgages | **481** | **–** | **36** | **510** | **1,027** |
| Other Retail | **2,060** | **–** | **321** | **(13)** | **2,368** |
| Commercial Banking | **1,051** | **1,222** | **131** | **(2)** | **2,402** |
| Other | **50** | **–** | **400** | **–** | **450** |
| **Total** | **3,642** | **1,222** | **888** | **495** | **6,247** |
| At 31 December 2019 | | | | | |
| UK Mortgages | 386 | – | – | 183 | 569 |
| Other Retail | 1,531 | – | – | (10) | 1,521 |
| Commercial Banking | 445 | 890 | – | (20) | 1,315 |
| Other | 50 | – | – | – | 50 |
| Total | 2,412 | 890 | – | 153 | 3,455 |

1 Judgements introduced in 2020 due to the impact that COVID-19 and resulting interventions have had on the Group's economic outlook and observed loss experience, which have required additional model limitations to be addressed.

**Judgements due to COVID-19**

UK mortgages: £36 million

This reflects an adjustment made to reflect an increase in the time assumed between default and repossession as a result of the Group temporarily suspending the repossession of properties to support customers during the pandemic.

Other Retail: £321 million

These adjustments principally comprise:

**Recognition of impact of support measures: £218 million**

The use of payment holidays along with subdued levels of consumer spending is judged to have temporarily reduced the flow of accounts into arrears and default and to have also improved average credit scores across portfolios. Management believes that the resulting position does not fully reflect the underlying credit risk in the portfolios. Adjustments have therefore been made to increase expected future rates of default and remove the impact of the observed improvement in average credit scores.

**Incorporation of forward-looking LGDs: £86 million**

Modelled LGDs in non-mortgage Retail portfolios are predominantly based on observed customer behaviour and resulting incurred losses. Management believes that this may not be representative of future experience, given the current economic outlook, and consequently an adjustment has been made to increase forward-looking LGDs to reflect a deterioration in cure and recovery rates. The impact has been estimated by using experience of losses in previous downturns and management's view of relative comparability of anticipated economic scenarios.

Commercial Banking: £131 million

This adjustment principally comprises:

**Adjustment to economic variables used as inputs to models: £93 million**

Management does not believe that the observed corporate insolvency rates used as an input to Commercial default models adequately reflect the current economic situation and outlook given the temporary government support. As a result, the observed reductions in the rate of insolvencies have been replaced with an increase proportionate to that seen in unemployment to generate a level of predicted defaults.

[33] *Lloyds Banking Group plc, Annual Report and Accounts 2020*, Notes to the consolidated financial statements, Note 3. Critical accounting judgements and estimates, pages 236-237.

### Other: £400 million

**Central overlay in respect of economic uncertainty: £400 million**

An important element of the methodology used to calculate the Group's ECL allowance is the determination of a base case economic scenario, predicated on certain conditioning assumptions, from which alternative scenarios are derived using stochastic shocks. The rapid evolution of the pandemic and significant changes that this has brought about could continue into 2021 and may partially invalidate the conditioning assumptions that underpin the Group's base case scenario. Management believes that the risks to the conditioning assumptions around the base case scenario are markedly to the downside, reflecting notably the potential for a material delay in the vaccination programme or reduction in its effectiveness from further virus mutation and the corresponding delayed withdrawal of restrictions on social interaction or introduction of further lockdowns. The Group's ECL allowances are required to reflect an unbiased probability-weighted view of all possible future outcomes and therefore management believes that an adjustment is required to capture these additional risks.

An adjustment of £400 million has been made to increase the Group's ECL allowances to reflect this increased uncertainty around the conditioning assumptions. This equates to a 1 percentage point increase in unemployment allied with a 5 per cent lower HPI in 2021, reflecting a more immediate and therefore greater ECL impact than the gradual increase reflected in the stated univariate sensitivity. It is proportionate to the level of volatility seen in forecasts as the pandemic has unfolded and is also equivalent to a 10 per cent re-weighting from the upside to the severe downside scenario. The adjustment, which has not been allocated to a specific portfolio, has been allocated against Stage 1 assets given the downside risks are largely considered to relate to exposures with currently low default probabilities, the majority of which are in Stage 1. Through 2021 the scale of the uncertainty is expected to diminish and the need for this adjustment will then be reassessed.

## Other judgements

### UK mortgages: £510 million (2019: £183 million)

These adjustments principally comprise:

**Adjustment to modelled forecast parameters: £193 million (2019: £nil)**

Adjustments have been required to the estimated defaults used within the ECL calculation for UK mortgages following the adoption of new default forecast models. Forecast models which predict quarterly defaults based on several economic variables have been developed using the response from the previous recession, as per usual modelling best practice. However, management believe further adjustments are necessary when the results of these models have been benchmarked to observed levels, given the atypical nature of the current economic outlook. These were derived using historical observed default rates under previous downturn conditions to ensure that the resulting forecast best reflected management's view given the current economic outlook. The adjustment to forward-looking parameters prior to their use in ECL calculations ensures that all downstream account level calculations reflect the Group's best view of credit losses in respect of the economic scenarios stated. As such this in-model adjustment is reflected within all scenarios, assessment of staging and in subsequent assessment of all post-model adjustments.

**End-of-term interest-only: £179 million (2019: £132 million)**

The current definition of default used in the UK mortgages impairment model excludes past term interest-only accounts that continue to make interest payments but have missed their capital payment upon maturity of the loan. This adjustment therefore mitigates the risk that the model understates the credit losses associated with interest-only accounts which have missed, or will potentially miss, their final capital payment. For those accounts that have reached end of term this adjustment manually overwrites PDs to 70 per cent or 100 per cent, thereby moving them into Stage 2, or Stage 3, depending on whether they are deemed performing, or non-performing respectively. For interest-only accounts with six years or less to maturity an appropriate incremental PD uplift is made to PDs based on the probability of missing a future capital payment, assessed through segmentation of behaviour score, debt-to-value and worst ever arrears status. The increase in the judgement in 2020 is primarily driven by an increase in the stock of long-term defaults following COVID-19 related litigation suspension.

**Long-term defaults: £87 million (2019: £33 million)**

The Group suspended mortgage litigation activity between late 2014 and mid 2018 as changes were implemented to the treatment of amounts in arrears, interrupting the natural flow of accounts to possession. An adjustment is made to ensure adequate provision coverage considering the resulting build-up of accounts in long term default. Coverage is uplifted to the equivalent levels of those accounts already in repossession on an estimated shortfall of balances expected to flow to possession. A further adjustment is made to mitigate for the risk that credit model provision understates the probability of possession for accounts which have been in default for more than 24 months, with an arrears balance increase in the last 6 months. These accounts have their probability of possession set to 95 per cent based on observed historical losses incurred on accounts that were of an equivalent status. The increase in judgement in 2020 is primarily driven by an increase in the stock of long-term defaults following COVID-19 related litigation suspension.

### Other Retail: £(13) million (2019: £(10) million)

These adjustments principally comprise:

**Lifetime extension on revolving products: £81 million (2019: £36 million)**

Unsecured revolving products use a model lifetime definition of three years based on historic data which shows that substantially all accounts resolve in this time. An adjustment is made to extend the lifetime used for Stage 2 exposures to six years by adding incremental probability of default through the extrapolation of the default trajectory observed throughout the three years and beyond. The resulting additional ECL allowance is added to Stage 2 accounts proportionate to the modelled three year PD. The increase in the judgement in 2020 is driven by growth in Stage 2 assets and their coverage, rather than any change to the lifetime assumption.

**Unsecured non-scored accounts: £(72) million (2019: £nil)**

Due to a shortcoming in the models, it is not possible to retrieve relevant credit data for a number of accounts and therefore no PD is available and no assessment of whether there has been a SICR can be carried out. The model defaults these accounts to Stage 2 and a proxy ECL allowance calculated based on similar accounts within the portfolio. The deterioration in the economic outlook and growth in the number of accounts subject to this proxy have resulted in this approach having a more significant effect and an exercise has been carried out to identify and adjust those accounts which should not have been allocated to Stage 2.

**Credit Card LGD alignment: £(55) million (2019: £(22) million)**

The MBNA impairment model was developed using historical MBNA data. Following the acquisition of the business and the subsequent migration of this portfolio to Lloyds Banking Group collections strategies an adjustment is required to reflect the recent improvement in cure rates now evident as collections strategies harmonise, which are not captured by the original MBNA model development data.

In its 2020 annual report, Société Générale provided disclosures in respect of adjustments made by management to its modelled ECL by portfolio, including explanatory narrative.

**_Extract 23[34]: Société Générale, Annual Results 2020, Management judgemental adjustments_** — *France*

COVID-19 CRISIS

This section summarises the main developments relating to the Covid-19 crisis.

Over 2020, the exceptional nature of the economic crisis caused by the pandemic, combined with unprecedented government support measures, required adjustments to the models used to calculate impairments and provisions for credit risk to best reflect expected losses based on our expectations of future defaults. As at 31 December 2020, the default situations observed remain moderate as a result of the implementation of moratoria. However, an increase in defaults is expected for 2021 and 2022, which should be reflected, as early as 2020, in the provisions for performing loans in Stage 1 and under-performing loans in Stage 2.

Consequently:

- the models and parameters used to estimate expected credit losses have been reviewed based on the economic scenarios described in paragraph 5 of Note 1;
- the adjustments made to supplement the models used have been updated (sectoral adjustments and adjustments when using simplified models)
- a new criterion for reclassifying loans into Stage 2 under-performing loans has been established.

**UPDATE OF THE MODELS AND PARAMETERS USED TO ESTIMATE EXPECTED CREDIT LOSSES**

When applied for determining future default rates, the models used to estimate expected credit losses didn't reflect accurately the economic uncertainties stemming from the current crisis.

Consequently, the Group made some adjustments to its models to better reflect the impact of economic scenarios on expected credit losses.

**GDP adjustments**

The sharp downturn in economic activity resulting from the lockdown measures taken by governments has led to high volatility of quarterly GDP growth rates (year-on-year) for the 2021 and 2022 forecasts in the countries where the Group operates.

In addition, the authorities have adopted financial support measures for households and businesses to help them cope with this sudden deterioration in activity. Therefore, it seems likely that a time-lag will appear between the deterioration in the portfolios' credit quality and that of activity, the first being delayed with respect to the second.

In order to account for this time-lag, the Group has revised its models and retained for each quarter from 2020 to 2022 the (logarithmic) average variation in GDP over the past eight quarters compared to a base of 100 in 2019.

This adjustment is applied to each of the four scenarios (*SG Favourable*, *SG Central*, *SG Extended and SG Stress*) for the GDP series used to model expected credit losses (see Note 1, paragraph 5).

The table below results from the combination of the four scenarios after adjustment; it shows the adjusted GDP growth rates used in the models applied to estimate expected credit losses (in percentages):

| | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|
| Euro area | (2.8) | (5.8) | (3.8) | 1.4 | 1.7 |
| France | (3.3) | (7.1) | (5.3) | 1.6 | 1.8 |
| United States of America | (2.3) | (3.5) | (1.5) | 2.3 | 2.2 |
| China | (2.3) | 1.8 | 4.6 | 4.5 | 4.5 |

[34] *Société Générale Group, Consolidated Financial Statements* 31.12.2020, Note 3.- - Impairment and provisions, pages 81-82.

**Adjustment of the margin rate of French companies**

In France, the pandemic economic shock caused a decrease in corporate profit margin. According to the Group's economists, this deteriorated margin rate does not, however, take sufficient account of State support measures to reduce the companies' financial difficulties, particularly through the *PGE* mechanism. To better reflect the impact of these measures, an add-on equivalent to 2.4 points of the 2019 added value has been included in all scenarios for 2020 and the first half of 2021 regarding the margin rate of French companies. However, no add-on has been applied over the remainder of the forecast horizon for expected credit losses.

It is worth noting that should the government stop some of the support measures put in place in the second quarter of 2020, the Group would have to scale down the margin rate add-on of French companies.

As at 31 December 2020, the adjustments in macroeconomic variables and probabilities of default led the Group to increase the amount of impairment and provisions for credit risk by 496 million euros.

ADJUSTMENTS MADE IN ADDITION TO THE APPLICATION OF MODELS

**Sectoral adjustments**

The different models used to estimate the expected credit losses may be supplemented by sectoral adjustments that increase or decrease the amount of expected credit losses. These adjustments allow to better anticipate defaults or recoveries in certain cyclical sectors. These adjustments have been reviewed and supplemented to take account of the specific risk on sectors particularly affected by the Covid-19 crisis. The total sectoral adjustments amount to 406 million euros as at 31 December 2020 (244 million euros as at 31 December 2019).

**Adjustments in the context of simplified models**

For entities lacking developed models for estimating the correlations between the macroeconomic variables and the probability of default, adjustments have also been performed to reflect the deterioration of credit risk on some portfolios when this deterioration could not be measured by a line by line analysis of the outstanding loans.
These adjustments amount to 424 million euros as at 31 December 2020 (78 million euros as at 31 December 2019).

## 5. Sensitivity analysis

### What we expected

Banks provided both multi-factor and single-factor sensitivity analysis, as well as narrative disclosures to further explain their approach and assumptions. However, there remain inconsistencies in the basis of preparation and presentation of the relevant disclosures which limit comparability across banks.

As an example of the types of disclosure that entities should make on major sources of estimation uncertainty, IAS 1.129(b) includes the sensitivity of carrying amounts to the methods, assumptions and estimates underlying their calculation, including the reasons for the sensitivity.

Banks have updated their macroeconomic scenarios to reflect a revised economic outlook as a result of the coronavirus pandemic. While this represents the entity's best estimate of the expected credit losses based on reasonable and supportable information at the reporting date, alternative outcomes are possible, especially in the current context of increased uncertainty. There was significant diversity in practice in this area in the 2019 annual financial statements, with some entities providing detailed sensitivity analysis while others provided limited or no disclosures in this area. Given the heightened level of uncertainty at year-end December2020, we expected entities to increase the level of disclosure in this area, in particular, those that provided little information in the past, in order to allow users to understand the degree of estimation uncertainty at the reporting date.

This could include a multi-factor sensitivity analysis (i.e., varying multiple inputs within a scenario at the same time) and a single factor sensitivity analysis (varying only one of the inputs in isolation), such as sensitivity to changes in PD or to changes in a House Price Index (HPI) for retail exposures.

The multi-factor sensitivity analysis can be based on the same economic scenarios that are modelled for the purposes of estimating ECL. The disclosure could show the magnitude of the ECL provision when a 100% weighting is applied to a single scenario. Other possible multi-factor analyses could be additionally or alternatively presented, also considering regulatory expectations in this area. Further guidance is provided in the DECL recommendations.

This section sets out expectations of the disclosures that we considered should have been provided by banks in their annual financial statements where relevant, in respect of multi-factor and single factor sensitivity analyses. We provide extracts of the disclosures made by banks in their annual financial statements for the year ended 31 December 2020 in this respect, for illustration purposes.

***Multi-factor sensitivity analysis: effect of applying a 100% weighting on a number of macroeconomic scenarios***

A multi-factor sensitivity analysis could be disclosed, based on the same economic scenarios that are modelled for the purposes of estimating ECL. The disclosure could include the following:

- An estimate of the effect on ECL of a 100% weighting of at least three economic scenarios, chosen in order to better illustrate the effect of non-linearity. For example, this could include the central scenario, an upside scenario and a downside scenario
- For each of those scenarios individually, the gross carrying amount or percentage of assets that would, under that scenario, have been the subject of a lifetime ECL provision rather than a 12-month provision (or vice versa)

- Narrative disclosure could be provided to explain whether and how off-balance sheet exposures are included
- A clear description of the articulation between the sensitivity analysis provided and the impact of overlays and post-model adjustments (for example, whether some overlays would go away under certain scenarios)
- For banks applying a Monte Carlo simulation approach to modelling ECL, it is recognised that, with a high volume of scenarios, the disclosure approach described above may neither be possible nor practical. In these cases, useful information about measurement uncertainty could be provided by disclosing the ECL resulting from using a meaningful range of the values of the key parameters, such as those at the 90th percentile and the 10th percentile of the range used in the Monte Carlo simulation in addition to the central scenario, and what the values of those parameters are. Such a disclosure would be similar to disclosure of downside and upside scenarios
- In providing the above disclosures, it is recommended that the bank explains the limitations of the multi-factor sensitivity disclosure

*Single-factor sensitivity analysis – Effect of changing single inputs within a macroeconomic scenario*

- Single-factor disclosures could be provided in addition to multi-factor sensitivity analysis, in which case, they should be accompanied by an explanation of their limitations
- Single-factor sensitivities show the effect of a change of a key input to the economic scenarios in isolation (e.g., GDP, interest rates or unemployment rate). Entities may focus on disclosing the sensitivity to a specific parameter to which a portfolio is particularly sensitive, such as a housing price index for a mortgage portfolio

Additionally, in order to highlight the sensitivity of the ECL estimate to a change in significant increases in credit risk (SICR) assumptions, entities could consider disclosing the effect of applying a lifetime ECL for all financial assets (i.e., as if they all Stage 1 financial assets migrated to Stage 2).

## What we observed

Banks have provided both multi-factor and single-factor sensitivity analysis as well as narrative disclosures to further explain their approach and assumptions. However, there remain significant inconsistencies in the basis of preparation and presentation of the relevant disclosures which do not facilitate comparability across banks, for example:

- Not all banks disclosed the effect of sensitivities on staging, with some entities not adjusting the stage allocation for the purpose of sensitivity analysis
- Even fewer banks appear to have incorporated the effect of model adjustments and overlays and it was sometimes unclear whether they had done so
- A few banks disclosed single-factor sensitivities (e.g., impact of shifts in unemployment rate and House Prices Index on retail portfolios or moving to full lifetime ECLs)
- Finally, there is diversity in the presentation of the impact of the sensitivity analysis by portfolio, with some banks providing more granularity than others and most of them using different classifications and portfolios,

a combination of sector, market and specific business segment or specific entity. For example:

- Some banks compare each scenario to the reported total ECL allowance while others only compare it to the base case
- Some banks compare the reported ECL to base case scenario only for the total while others present the same by category or portfolio of assets
- The ECL number (basis) used to test the sensitivity differs from bank to bank (for example some banks use total ECL, others use total ECL adjusted for specific portfolios while others still use Stage 1 and Stage 2 ECL only)
- Stage 3 assets and off-balance-sheet exposures are sometimes included and sometimes excluded from the analysis
- In some cases, banks disclose two sensitivity analyses, one where they keep staging constant and one where they change staging for each scenario
- The effect of overlays was not reflected consistently in the sensitivity analyses presented, as sensitivities were generally calculated on the modelled output only. In these cases, the sensitivity analysis does not show the complete effect on ECL of, for instance, a change in probability weights

## How we see it

It is evident from the above that while banks have presented in some cases rather extensive sensitivity analysis disclosures in some cases, there remains substantial diversity in practice which hinders comparability across banks.

Going forward, we would expect to see:

- Continued focus on this significant disclosure requirement for banks, with increased expectations from users and market regulators, including in relation to comparability of the effects disclosed
- More comprehensive narrative around how the sensitivity analysis is developed; and
- An attempt at achieving more consistency / comparability across banks on key components of the analysis, including:
    - A more consistent breakdown of the impacts of the analysis (e.g. by key products or asset classes)
    - A more extensive use of the approach consisting in weighting at 100% each scenario used in the reported probability weighted ECL
    - The impact of alternative assumptions on staging
    - The scope of instruments covered (in particular in relation to stage 3 and off-balance sheet exposures)
    - The impact of overlays

## Examples

In its 2020 annual report, ABN AMRO provided disclosure, in tabular format, of its macroeconomic scenario weights, value of the macroeconomic inputs for each year of the forecast period including a comparison with the prior period and a sensitivity analysis

***Extract 24[35]: ABN AMRO, Annual Results 2020 – ECL: macroeconomic scenarios and sensitivity analysis*** *The Netherlands*

**Macroeconomic scenarios in 2020** Audited

| (in millions) | Weight | Macroeconomic variable | 2021 | 2022 | 2023 | 2024 | Unweighted ECL[4] | Weighted ECL[4] |
|---|---|---|---|---|---|---|---|---|
| | | Real GDP Netherlands[1] | 4.4% | 4.3% | 2.0% | 1.7% | | |
| Positive | 10% | Unemployment[2] | 6.2% | 6.2% | 5.6% | 4.8% | 653 | |
| | | House price index[3] | 5.0% | 3.0% | 2.0% | 3.0% | | |
| | | Real GDP Netherlands | 3.0% | 3.6% | 2.3% | 1.8% | | |
| Baseline | 50% | Unemployment | 6.4% | 7.9% | 6.9% | 6.1% | 688 | 703 |
| | | House price index | 0.0% | 0.0% | 2.0% | 3.0% | | |
| | | Real GDP Netherlands | 0.7% | 3.0% | 1.0% | 1.4% | | |
| Negative | 40% | Unemployment | 6.8% | 8.4% | 7.8% | 6.8% | 734 | |
| | | House price index | -3.0% | -5.0% | 0.0% | 3.0% | | |

[1] Real GDP Netherlands, % change year-on-year.
[2] Unemployment Netherlands, % of labour force.
[3] House price index Netherlands – average % change year-on-year.
[4] Excluding ECL for stage 3.

[35] *ABN AMRO Bank NV, Annual Report 2020, Risk,* funding & capital review, page 115. The bank presented comparatives for 2019 which have not been included in this illustrative extract.

In its 2020 annual report, Barclays PLC provided ECL sensitivity disclosures for each scenario by portfolio and by stage, as well as a reconciliation of the total ECL charge. Model exposures are based on exposure at default values and are allocated to a stage based on the individual scenario (except for stage 3 exposures).

**Extract 25[36]: Barclays PLC, Annual Report 2020 – ECL under 100% weighted scenarios** | *United Kingdom*

**ECL under 100% weighted scenarios for modelled portfolios (audited)**

The table below shows the ECL assuming scenarios have been 100% weighted. Model exposures are allocated to a stage based on the individual scenario rather than through a probability-weighted approach as required for Barclays reported impairment allowances. As a result, it is not possible to back solve to the final reported weighted ECL from the individual scenarios as a balance may be assigned to a different stage dependent on the scenario. Model exposure uses exposure at default (EAD) values and is not directly comparable to gross exposure used in prior disclosures. For Credit cards, unsecured loans and other retail lending, an average EAD measure is used (12-month or lifetime, depending on stage allocation in each scenario). Therefore, the model exposure movement into Stage 2 is higher than the corresponding Stage 1 reduction.

All ECL using a model is included, with the exception of Treasury assets (£13m of ECL), providing additional coverage as compared to the 2019 year-end disclosure. Non-modelled exposures and management adjustments are excluded. Management adjustments can be found in the Management adjustments to models for impairment section.

Model exposures allocated to Stage 3 do not change in any of the scenarios as the transition criteria relies only on observable evidence of default as at 31 December 2020 and not on macroeconomic scenarios.

The Downside 2 scenario represents a severe global recession with substantial falls in both UK and US GDP. Unemployment in UK markets rises towards 10% and US markets rises towards 14% and there are substantial falls in asset prices including housing. Under the Downside 2 scenario, model exposure moves between stages as the economic environment weakens. This can be seen in the movement of £27bn of model exposure into Stage 2 between the Weighted and Downside 2 scenario. ECL increases in Stage 2 predominantly due to unsecured portfolios as economic conditions deteriorate.

| | Scenarios | | | | | |
|---|---|---|---|---|---|---|
| **As at 31 December 2020** | Weighted | Upside 2 | Upside 1 | Baseline | Downside 1 | Downside 2 |
| **Stage 1 Model Exposure (£m)** | | | | | | |
| Home loans | **131,422** | **134,100** | **133,246** | **132,414** | **130,547** | **128,369** |
| Credit cards, unsecured loans and other retail lending | **51,952** | **53,271** | **52,932** | **51,995** | **50,168** | **48,717** |
| Wholesale loans | **149,099** | **155,812** | **154,578** | **152,141** | **144,646** | **131,415** |
| **Stage 1 Model ECL (£m)** | | | | | | |
| Home loans | **6** | **4** | **5** | **6** | **14** | **42** |
| Credit cards, unsecured loans and other retail lending | **392** | **316** | **340** | **372** | **415** | **415** |
| Wholesale loans | **262** | **242** | **258** | **249** | **278** | **290** |
| **Stage 1 Coverage (%)** | | | | | | |
| Home loans | **–** | **–** | **–** | **–** | **–** | **–** |
| Credit cards, unsecured loans and other retail lending | **0.8** | **0.6** | **0.6** | **0.7** | **0.8** | **0.9** |
| Wholesale loans | **0.2** | **0.2** | **0.2** | **0.2** | **0.2** | **0.2** |
| **Stage 2 Model Exposure (£m)** | | | | | | |
| Home loans | **19,180** | **16,502** | **17,356** | **18,188** | **20,055** | **22,233** |
| Credit cards, unsecured loans and other retail lending | **13,399** | **10,572** | **11,579** | **13,176** | **16,477** | **19,322** |
| Wholesale loans | **32,677** | **25,963** | **27,198** | **29,635** | **37,130** | **50,361** |
| **Stage 2 Model ECL (£m)** | | | | | | |
| Home loans | **37** | **31** | **32** | **33** | **42** | **63** |
| Credit cards, unsecured loans and other retail lending | **2,207** | **1,618** | **1,837** | **2,138** | **2,865** | **3,564** |
| Wholesale loans | **1,410** | **952** | **1,047** | **1,223** | **1,771** | **2,911** |
| **Stage 2 Coverage (%)** | | | | | | |
| Home loans | **0.2** | **0.2** | **0.2** | **0.2** | **0.2** | **0.3** |
| Credit cards, unsecured loans and other retail lending | **16.5** | **15.3** | **15.9** | **16.2** | **17.4** | **18.4** |
| Wholesale loans | **4.3** | **3.7** | **3.8** | **4.1** | **4.8** | **5.8** |
| **Stage 3 Model Exposure (£m)** | | | | | | |
| Home loans | **1,778** | **1,778** | **1,778** | **1,778** | **1,778** | **1,778** |
| Credit cards, unsecured loans and other retail lending | **2,585** | **2,585** | **2,585** | **2,585** | **2,585** | **2,585** |
| Wholesale loans[a] | **2,211** | **2,211** | **2,211** | **2,211** | **2,211** | **2,211** |
| **Stage 3 Model ECL (£m)** | | | | | | |
| Home loans | **307** | **282** | **286** | **290** | **318** | **386** |
| Credit cards, unsecured loans and other retail lending | **2,003** | **1,947** | **1,972** | **2,001** | **2,055** | **2,078** |
| Wholesale loans[a] | **146** | **128** | **134** | **141** | **157** | **184** |
| **Stage 3 Coverage (%)** | | | | | | |
| Home loans | **17.3** | **15.9** | **16.1** | **16.3** | **17.9** | **21.7** |
| Credit cards, unsecured loans and other retail lending | **77.5** | **75.3** | **76.3** | **77.4** | **79.5** | **80.4** |
| Wholesale loans[a] | **6.6** | **5.8** | **6.1** | **6.4** | **7.1** | **8.3** |
| **Total Model ECL (£m)** | | | | | | |
| Home loans | **350** | **317** | **323** | **329** | **374** | **491** |
| Credit cards, unsecured loans and other retail lending | **4,602** | **3,881** | **4,149** | **4,511** | **5,335** | **6,057** |
| Wholesale loans[a] | **1,818** | **1,322** | **1,439** | **1,613** | **2,206** | **3,385** |
| **Total ECL** | **6,770** | **5,520** | **5,911** | **6,453** | **7,915** | **9,933** |

**Note**

a Material wholesale loan defaults are individually assessed across different recovery strategies. As a result, ECL of £902m is reported as individually assessed impairments in the table below.

| **Reconciliation to total ECL** | £m |
|---|---|
| Total model ECL | **6,770** |
| ECL from individually assessed impairments | **902** |
| ECL from non-modelled and other management adjustments[a] | **1,727** |
| **Total ECL** | **9,399** |

**Note**

a Includes £1.4bn of post-model adjustments and £0.3bn ECL from non-modelled exposures.

The dispersion of results around the Baseline is an indication of uncertainty around the future projections. The disclosure highlights the results of the alternative scenarios enabling the reader to understand the extent of the impact on exposure and ECL from the upside/downside scenarios. Consequently, the use of five scenarios with associated weightings results in a total weighted ECL uplift from the Baseline ECL of 5%, largely driven by credit card losses which have more linear loss profiles than UK home loans and wholesale loan positions.

**Home loans:** Total weighted ECL of £350m represents a 6% increase over the Baseline ECL (£329m), and coverage ratios remain steady across the Upside scenarios, Baseline and Downside 1 scenario. However, total ECL increases in the Downside 2 scenario to £491m, driven by a significant fall in UK HPI (18.3%) reflecting the non-linearity of the UK portfolio.

**Credit cards, unsecured loans and other retail lending:** Total weighted ECL of £4,602m represents a 2% increase over the Baseline ECL (£4,511m) reflecting the range of economic scenarios used, mainly impacted by Unemployment and other key retail variables. Total ECL increases to £6,057m under

[36] *Barclays PLC, Annual Report 2020, Risk Management, Credit Risk*, pages 186-189. The bank presented comparatives for 2019 which are not included in this illustrative extract.

the Downside 2 scenario, mainly driven by Stage 2, where coverage rates increase to 18.4% from a weighted scenario approach of 16.5% and circa £6bn increase in model exposure that meets the Significant Increase in Credit Risk criteria and transitions from Stage 1 to Stage 2.

**Wholesale loans:** Total weighted ECL of £1,818m represents a 13% increase over the Baseline ECL (£1,613m) reflecting the range of economic scenarios used, with exposures in the Investment Bank particularly sensitive to the Downside 2 scenario.

**Staging sensitivity (audited)**

An increase of 1% (£3,510m) of total gross exposure into Stage 2 (from Stage 1), would result in an increase in ECL impairment allowance of £232m based on applying the difference in Stage 2 and Stage 1 average impairment coverage ratios to the movement in gross exposure (refer to Loans and advances at amortised cost by product).

In its 2020 annual report, NatWest provided ECL sensitivity disclosures for all modelled portfolios (i.e., performing exposures in stage 1 and stage 2) for three scenarios, reflecting the effects by segment and by stage and including the impact of modelled overlays. The exposures by stage vary in each scenario.

**Extract 26[37]: NatWest Group, Annual report and accounts 2020 – Measurement uncertainty and ECL sensitivity analysis** *United Kingdom*

**Credit risk** continued

**Measurement uncertainty and ECL sensitivity analysis**

The recognition and measurement of ECL is complex and involves the use of significant judgement and estimation, particularly in times of economic volatility and uncertainty. This includes the formulation and incorporation of multiple forward-looking economic conditions into ECL to meet the measurement objective of IFRS 9. The ECL provision is sensitive to the model inputs and economic assumptions underlying the estimate.

The focus of the simulations is on ECL provisioning requirements on performing exposures in Stage 1 and Stage 2. The simulations are run on a stand-alone basis and are independent of each other; the potential ECL impacts reflect the simulated impact as at 31 December 2020. Scenario impacts on SICR should be considered when evaluating the ECL movements of Stage 1 and Stage 2. In all scenarios the total exposure was the same but exposure by stage varied in each scenario.

Stage 3 provisions are not subject to the same level of measurement uncertainty – default is an observed event as at the balance sheet date. Stage 3 provisions therefore have not been considered in this analysis.

The impact arising from the upside, downside and extreme downside scenarios has been simulated. These scenarios are three of the four discrete scenarios used in the methodology for Personal multiple economic scenarios as described in the Economic loss drivers section. In the simulations, NatWest Group has assumed that the economic macro variables associated with these scenarios replace the existing base case economic assumptions, giving them a 100% probability weighting and thus serving as a single economic scenario.

These scenarios have been applied to all modelled portfolios in the analysis below, with the simulation impacting both PDs and LGDs. Modelled overlays present in the underlying ECL estimates are also sensitised in line with the modelled ECL movements, but those that were judgmental in nature, primarily those for economic uncertainty, were not (refer to the Governance and post model adjustments section). As expected, the scenarios create differing impacts on ECL by portfolio and the impacts are deemed reasonable. In this simulation it is assumed that existing modelled relationships between key economic variables and loss drivers hold, but in practice other factors would also have an impact, for example, potential customer behaviour changes and policy changes by lenders that might impact on the wider availability of credit.

NatWest Group's core criterion to identify a SICR is founded on PD deterioration, as discussed above. Under the simulations, PDs change and result in exposures moving between Stage 1 and Stage 2 contributing to the ECL impact.

The simulated ECL impacts in the December 2020 sensitivity analysis were significantly higher than in the sensitivity analysis carried out at December 2019 (refer to the NatWest Group plc (formerly The Royal Bank of Scotland Group plc) 2019 Annual Report and Accounts for further details). The relative ECL movements across the scenarios were reflective of a higher actual reported ECL, including certain treatments to capture the idiosyncratic risk of COVID-19, with the economics in the extreme downside scenario significantly more adverse than in the 2019 downside 2 scenario.

| 2020 | Actual | Upside | Downside | downside |
|---|---|---|---|---|
| Stage 1 modelled exposure (£m) | | | | |
| Retail Banking | 135,017 | 136,977 | 133,600 | 99,170 |
| Ulster Bank RoI Personal & Business Banking | 11,124 | 11,318 | 11,030 | 9,590 |
| Wholesale | 115,572 | 124,501 | 114,149 | 96,616 |
| | 261,713 | 272,796 | 258,779 | 205,376 |
| Stage 1 modelled ECL (£m) | | | | |
| Retail Banking | 124 | 94 | 128 | 130 |
| Ulster Bank RoI Personal & Business Banking | 27 | 25 | 29 | 29 |
| Wholesale | 322 | 316 | 331 | 311 |
| | 473 | 435 | 488 | 470 |
| Stage 1 coverage (%) | | | | |
| Retail Banking | 0.09% | 0.07% | 0.10% | 0.13% |
| Ulster Bank RoI Personal & Business Banking | 0.24% | 0.22% | 0.26% | 0.30% |
| Wholesale | 0.28% | 0.25% | 0.29% | 0.32% |
| | 0.18% | 0.16% | 0.19% | 0.23% |
| Stage 2 modelled exposure (£m) | | | | |
| Retail Banking | 32,942 | 30,982 | 34,359 | 68,789 |
| Ulster Bank RoI Personal & Business Banking | 1,738 | 1,544 | 1,832 | 3,272 |
| Wholesale | 45,194 | 36,265 | 46,617 | 64,150 |
| | 79,874 | 68,791 | 82,808 | 136,211 |
| Stage 2 modelled ECL (£m) | | | | |
| Retail Banking | 897 | 665 | 968 | 1,727 |
| Ulster Bank RoI Personal & Business Banking | 95 | 83 | 107 | 152 |
| Wholesale | 2,066 | 1,504 | 2,214 | 3,376 |
| | 3,058 | 2,252 | 3,289 | 5,255 |
| Stage 2 coverage (%) | | | | |
| Retail Banking | 2.72% | 2.15% | 2.82% | 2.51% |
| Ulster Bank RoI Personal & Business Banking | 5.47% | 5.38% | 5.84% | 4.65% |
| Wholesale | 4.57% | 4.15% | 4.75% | 5.26% |
| | 3.83% | 3.27% | 3.97% | 3.86% |

[37] *NatWest Group plc, Annual Report and Accounts 2020*, Risk and Capital Management: Credit risk, pages 178-180.

| | | | | |
|---|---|---|---|---|
| Stage 1 and Stage 2 modelled exposure (£m) | | | | |
| Retail Banking | 167,959 | 167,959 | 167,959 | 167,959 |
| Ulster Bank RoI Personal & Business Banking | 12,862 | 12,862 | 12,862 | 12,862 |
| Wholesale | 160,766 | 160,766 | 160,766 | 160,766 |
| | 341,587 | 341,587 | 341,587 | 341,587 |
| Stage 1 and Stage 2 modelled ECL (£m) | | | | |
| Retail Banking | 1,021 | 759 | 1,096 | 1,857 |
| Ulster Bank RoI Personal & Business Banking | 122 | 108 | 136 | 181 |
| Wholesale | 2,388 | 1,820 | 2,545 | 3,687 |
| | 3,531 | 2,687 | 3,777 | 5,725 |
| Stage 1 and Stage 2 coverage (%) | | | | |
| Retail Banking | 0.61% | 0.45% | 0.65% | 1.11% |
| Ulster Bank RoI Personal & Business Banking | 0.95% | 0.84% | 1.06% | 1.41% |
| Wholesale | 1.49% | 1.13% | 1.58% | 2.29% |
| | 1.03% | 0.79% | 1.11% | 1.68% |
| Reconciliation to Stage 1 and Stage 2 ECL (£m) | | | | |
| ECL on modelled exposures | 3,531 | 2,687 | 3,777 | 5,725 |
| ECL on non-modelled exposures | 68 | 68 | 68 | 68 |
| Total Stage 1 and Stage 2 ECL | 3,599 | 2,755 | 3,845 | 5,793 |
| Variance – (lower)/higher to actual total Stage 1 and Stage 2 ECL | | (844) | 246 | 2,194 |

Notes:

(1) Variations in future undrawn exposure values across the scenarios are modelled, however the exposure position reported is that used to calculate modelled ECL as at 31 December 2020 and therefore does not include variation in future undrawn exposure values.

(2) Reflects ECL for all modelled exposure in scope for IFRS 9; in addition to loans this includes bonds and cash. The analysis excludes non-modelled portfolios and exposure relating to bonds and cash.

(3) All simulations are run on a stand-alone basis and are independent of each other, with the potential ECL impact reflecting the simulated impact as at 31 December 2020. The simulations change the composition of Stage 1 and Stage 2 exposure but total exposure is unchanged under each scenario as the loan population is static.

(4) Refer to the Economic loss drivers section for details of economic scenarios.

(5) 2019 comparatives are not included as the sensitivity scenario analysis relates to the 31 December 2020 balance sheet position. Refer to the NatWest Group plc (formerly The Royal Bank of Scotland Group plc) 2019 Annual Report and Accounts for the sensitivity analysis carried out at that time.

Key points

- During 2020, ECL increased materially as a result of COVID-19 disruption and a negative economic outlook. Downside risk persisted and was reflected in the scenario weightings with heavier weighting to the downside than to the upside. Judgemental ECL post model adjustments reflected heightened uncertainty and expectation of increased defaults in 2021 and beyond. To a certain extent, these adjustments dampen the ECL uplift in the downside scenario, particularly in Wholesale which had already observed a larger proportionate increase in actual reported ECL and coverage.
- If the economics were as negative as observed in the extreme downside, overall Stage 1 and Stage 2 ECL was simulated to increase by over 60%. The non-linearity was more apparent in the Personal portfolio driven by mortgages, with the ECL mitigation impact of Wholesale portfolio securitisations observed in downside scenarios, where ECL did not increase to the same extent.
- The relatively small ECL uplift in the downside scenario (£246 million, 7% of actual) reflected the weighting within the multiple economic scenarios used in the actual reported ECL to the downside.
- In the upside scenario, the simulated ECL reduction (£844 million, 24% of actual) was lower than the uplift observed in the extreme downside (£2.2 billion), again reflecting the expectation that the non-linearity of losses was skewed to the downside.
- The simulated value of exposures in Stage 2 increased significantly in the extreme downside and was the key driver of the simulated ECL increase. The movement in Stage 2 balances in the other simulations was less marked, with the exception of Wholesale, where a significant reduction was observed in the upside scenario reflecting the sensitivity of SICR criteria to relatively small movements in PD.
- In a separate simulation covering the base case economic scenario (one of the multiple economic scenarios), and assuming a 100% weighting to that scenario, the total Stage 1 and Stage 2 ECL was simulated to be approximately 8% lower than the actual reported ECL.

In its 2020 annual report, UBS Group AG included a single-factor sensitivity analysis reflecting the potential effects on stage 1 and stage 2 ECLs of changes in a key macroeconomic variable for the forecasting across all scenarios with all other factors remaining unchanged.

**Extract 27[38]: UBS Group AG, Annual report 2020, Consolidated financial statements, Sensitivity analysis** — Switzerland

**f) Sensitivity information**

As outlined in Note 1a, ECL estimates involve significant uncertainties at the time they are made.

**ECL model**

The models applied to determine point-in-time PDs and LGDs rely on market and statistical data, which has been found to correlate well with historically observed defaults in sufficiently homogeneous segments. The risk sensitivities for each of the IFRS 9 ECL reporting segments to such factors are summarized in Note 9.

**Forward-looking scenarios**

Depending on the scenario selection and related macroeconomic assumptions for the risk factors, the components of the relevant weighted average ECL change. This is particularly relevant for interest rates, which can move in both directions under a given growth assumption (for example, low growth with high interest rates in a stagflation scenario, versus low growth and falling interest rates in a recession). Management generally look for scenario narratives that reflect the key risk drivers of a given credit portfolio.

As forecasting models are complex, due to the combination of multiple factors, simple what-if analyses involving a change of individual parameters do not necessarily provide realistic information on the exposure of segments to changes in the macroeconomy. Portfolio-specific analyses based on their key risk factors would also not be meaningful, as potential compensatory effects in other segments would be ignored. The table below indicates some sensitivities to ECLs if a key macroeconomic variable for the forecasting period is amended across all scenarios with all other factors remaining unchanged.

**Potential effect on stage 1 and stage 2 positions from changing key parameters as at 31 December 2020**

| *USD million* | Baseline | Severe downside | Weighted average |
|---|---|---|---|
| **Change in key parameters** | | | |
| **Fixed income: 10-year government bonds (absolute change)** | | | |
| −0.5% | (1.36) | (1.84) | (1.93) |
| +0.5% | 2.10 | 3.19 | 3.23 |
| +1.00% | 5.69 | 6.86 | 7.19 |
| **Unemployment rate (absolute change)** | | | |
| −1.00% | (7.40) | (63.01) | (27.83) |
| −0.5% | (3.78) | (33.54) | (15.67) |
| +0.5% | 4.15 | 36.97 | 16.99 |
| +1.00% | 8.50 | 75.93 | 33.74 |
| **Real GDP growth (relative change)** | | | |
| -2.00% | 3.72 | 16.14 | 9.10 |
| -1.00% | 1.86 | 9.84 | 5.09 |
| +1.00% | (1.46) | (3.30) | (2.36) |
| +2.00% | (2.97) | (9.44) | (5.93) |
| **House Price Index (relative change)** | | | |
| −5.00% | 8.04 | 144.34 | 51.46 |
| −2.50% | 3.45 | 65.80 | 23.28 |
| +2.50% | (2.79) | (56.60) | (19.09) |
| +5.00% | (5.16) | (105.61) | (35.29) |
| **Equity (S&P500, EuroStoxx, SMI) (relative change)** | | | |
| −10.00% | 3.94 | 9.66 | 6.78 |
| −5.00% | 1.91 | 4.29 | 3.34 |
| +5.00% | (8.30) | (4.23) | (7.27) |
| +10.00% | (10.14) | (8.58) | (10.22) |

Sensitivities can be more meaningfully assessed in the context of coherent scenarios with consistently developed macroeconomic factors. The table on the previous page outlines favorable and unfavorable effects, based on reasonably possible alternative changes to the economic conditions for stage 1 and stage 2 positions. The ECL impact is calculated for material portfolios and disclosed for each scenario.

The forecasting horizon is limited to three years, with a model-based mean reversion of PD and LGD assumed thereafter. Changes to these timelines may have an effect on ECLs: depending on the cycle, a longer or shorter forecasting horizon will lead to different annualized lifetime PD and average LGD estimations. This is currently not deemed to be material for UBS, as a large proportion of loans, including mortgages in Switzerland, have maturities that are within the forecasting horizon.

[38] *UBS Group AG, Annual report 2020, Consolidated financial statements*, Note 20 Expected credit loss measurement – f) Sensitivity information, pages 346-347.

### Scenario weights

ECL is sensitive to changing scenario weights, in particular if narratives and parameters are selected that are not close to the baseline scenario, highlighting the non-linearity of credit losses.

As shown in the table on the bottom of this page, the ECL for stage 1 and stage 2 positions would have been USD 442 million (31 December 2019: USD 234 million) instead of USD 639 million (31 December 2019: USD 341 million) if ECL had been determined solely on the baseline scenario. The weighted average ECL therefore amounts to 145% (31 December 2019: 149%) of the baseline value.

**Potential effect on stage 1 and stage 2 positions from changing scenario weights or moving to an ECL lifetime calculation as at 31 December 2020**

| | Actual ECL allowances and provisions (as per Note 9) | | Pro forma ECL allowances and provisions, assuming application of 100% weighting | | | | Pro forma ECL allowances and provisions, assuming all positions being subject to lifetime ECL | |
|---|---|---|---|---|---|---|---|---|
| Scenarios | Weighted average | | Baseline | | Severe downside | | Weighted average | |
| *USD million, except where indicated* | ECL | in % of baseline | ECL | in % of baseline | ECL | in % of baseline | ECL | in % of baseline |
| **Segmentation** | | | | | | | | |
| Private clients with mortgages | (131) | 244 | (54) | 100 | (302) | 562 | (385) | 717 |
| Real estate financing | (76) | 138 | (55) | 100 | (123) | 224 | (131) | 237 |
| Large corporate clients | (206) | 149 | (138) | 100 | (298) | 216 | (307) | 222 |
| SME clients | (74) | 115 | (64) | 100 | (93) | 144 | (129) | 200 |
| Other segments | (152) | 116 | (131) | 100 | (183) | 140 | (385) | 294 |
| **Total** | **(639)** | **145** | **(442)** | **100** | **(999)** | **226** | **(1,336)** | **302** |

## 6. Significant increase in credit risk (SICR)

### What we expected

A number of banks have provided disclosures in respect of amendments to their SICR criteria to reflect the impact of COVID-19, including those related to payment holidays and other customer support schemes.

The COVID-19 crisis has led various governments to provide both financial and non-financial assistance to disrupted industry sectors and the affected businesses and other organisations. Also, banks were encouraged, recommended or required by governments and regulators in many jurisdictions to provide various forms of payment deferral schemes and other forms of customer support (e.g., by reducing or waiving interest and/or fees on certain facilities) and to offer new loans to customers under different types of government-backed schemes. Further forms of relief and support programmes were offered by banks on a voluntary basis.

In this context, the effects of the crisis were hardly observable in the customers' financial performance and it was very challenging to identify a significant deterioration in the credit quality of individual borrowers. In particular, banks could not rely on the usual risk indicators, such as movements in cash balances, arrears and forbearance measures as much as they used to before the outbreak of the pandemic.

Where banks have made amendments to their SICR criteria compared to their last annual financial statements, we would have expected them to disclose such changes (normally as changes in estimates). These would include, for example, enrolling in a payment deferral programme, or applying for an extension, which are considered indicators of an SICR. This would also include whether any adjustment to ratings or PD was applied to offset mechanical improvements triggered by increased liquidity as a result of support measures. For further consideration of this point, please refer to 'Payment deferral schemes, guaranteed loans and other forms of customer support in *Section 2 'Overall expected credit losses (ECL)'* above.

We would also have expected banks to consider disclosing whether, in order to identify an SICR trigger, they considered the information provided in the request for application to a relief programme (e.g., whether the customer indicated to have become unemployed or to be in a furlough scheme) or whether they considered any other information available in respect of the customer, and what such specific information is comprised of (e.g., customer behaviour in respect of other facilities provided by the bank or by other banks).

Where banks have applied a collective approach to measure an SICR (IFRS 9 B5.5.4), we would also have expected them to disclose that fact. The disclosure would include a description of the approach applied, considering the grouping of instruments by shared risk characteristics in accordance with IFRS 9 B5.5.5. Such disclosure could be aligned with the recommended disclosures in respect of 'high risk sectors' in *'Multiple economic scenarios and economic forecasts'* in *Section 3 'Economic scenarios'* above, if the collective staging approach considers the sector as a significant input.

### What we observed

A number of banks have provided specific disclosures in respect of amendments to their SICR criteria to ensure understandability of the impact. These banks provided primarily narrative disclosures to explain the impact of COVID-19 on the determination of SICR, and, in particular, the changes made to the SICR triggers normally established within their ECL process (both qualitative and quantitative). Such disclosures also made references to the impact of payment holidays and other customer support schemes in this respect.

Based on regulators' published guidance, large-scale moratoria were generally not considered to be forbearance measures and did not trigger Stage 2

transfers on a standalone basis. Then, because moratoria and guaranteed loans improved the apparent credit quality of borrowers, movements in forward-looking PD were the main driver for transfers as opposed to the more lagging backstops based on delinquency and forbearance.

Banks also supplemented their quantitative and qualitative criteria with targeted analyses for vulnerable sectors and for borrowers that had weaker pre-crisis ratings. They also strengthened the level of client monitoring implemented by credit managers and refined the analysis of accounts movements to differentiate cash inflows stemming from support measures versus actual business activity. When modelled PDs did not increase, banks used overlays to increase the ECL, but this was not always visible at the level of Stage 2 exposures as the overlays were additions to the ECL allowance and actual exposures were not transferred.

## How we see it

Although a number of banks have provided disclosures for temporary adjustments to previously defined SICR triggers to reflect the impact of COVID-19, they vary in granularity and are not necessarily accompanied by the quantitative impact of the amendments, for example, on the coverage ratios of the affected stages.

Most banks highlighted a material decrease in large-scale moratoria at year-end and an overall good performance of customers for whom the moratoria had expired. At the same time, they also stressed that significant uncertainties remained over the length and scale of support measures.

Going forward, we would expect to see:

- One of the main drivers of the SICR trigger amendments relates to the impact of customer support schemes. Given the fact that a significant share of loans at the end of 2020 were still subject to some form of support scheme, banks should consider disclosing additional information as to how the SICR triggers evolve.
- Specific risk monitoring approaches developed to improve early identification of troubled borrowers in the current circumstances will remain key, as well as their impact on risk classification and the ECL estimate. This includes the impact of temporary triggers (including when these are no longer applied).
- Recent trends on credit risk indicators, such as delinquency, forbearance and default, as well as recent trends on vulnerable sectors and expectations for the coming months in relation to planned withdrawals of support measures will also be a critical component of the SICR disclosures.
- Finally, explanations on movements will be a clear focus for users and regulators, including the trends by main portfolio (e.g., new transfers in Stage 2, transfers back to Stage 1, defaults, impact of new production, etc.) and the key drivers underlying the transfers (e.g., PD movements, delinquency, forbearance, portfolio approaches, request for an extension of payment holiday, etc.)

## Examples

In its 2020 annual report, ABN AMRO provided a description of the impact of COVID-19 and support measures on its SICR triggers. It also provided narrative disclosures around impairment charges by portfolio and the impact of movements across stages as a result of significant changes to credit risk.

***Extract 28[39]: ABN AMRO, Annual Report 2020 – Impact of COVID-19 on significant increase in credit risk and staging*** *The Netherlands*

### Impact of Covid-19 on determining SICR

Assets with a significant increase in credit risk (SICR) since initial recognition are classified in stage 2. Covid-19 significantly impacted some of the SICR triggers, mainly forbearance and watch. To account for the widespread impact of Covid-19 on credit risk, we temporarily added the industry sector of the client as an additional qualitative trigger. This section explains the relationship between Covid-19 and these three SICR triggers. The quantitative impact of Covid-19 on our risk classifications is presented in the credit risk section.

#### Forbearance

Forbearance applies to all individual clients with a liquidity need or who are facing financial difficulties and are offered borrower-specific arrangements to ensure they have sufficient liquidity to return to a healthy financial situation. Opt-out measures do not in themselves trigger forbearance. Instead, opt-in measures are assessed on a client level to establish whether the specific client is experiencing financial difficulties, and subsequently if the forbearance status is applicable.

#### Watch

Besides the normal review process ABN AMRO performed additional actions to ensure correct risk classification. These included additional client reviews, primarily of clients granted a payment moratorium. The outcome of these

[39] *ABN AMRO Bank NV, Annual Report 2020, Risk, funding & capital information, Impact of relief measures on credit risk pages 94-95 and Loan impairment charges and allowances per stage, page 113.*

client reviews led primarily to changes in the watch status of clients, but also to changes in forbearance or default status.

**Additional qualitative trigger: Industry sector**

Covid-19 developments and the government measures resulted in the economic outlook for specific subsectors changing rapidly. Each month, therefore, ABN AMRO identified the subsectors with an SICR. All clients in the subsectors with an elevated risk were transferred to stage 2, except for clients that had opted out of the payment holiday scheme. The increase in ECL that resulted from these stage overrides was recorded as a management overlay.

The impairment charges in 2020 amounted to EUR 2,303 million (2019: EUR 657 million). These charges were high due to the impact that Covid-19 and oil price developments had on our client portfolio and to three exceptional client files. Individual impairments in stage 3 were recorded mainly for corporate loans. The impairment charges in stage 1 and stage 2 related mainly to management overlays.

Impairment charges for CIB amounted to EUR 1,659 million, which was considerably higher than the EUR 376 million recorded in 2019. Since the start of Covid-19, all individual CIB exposures have been reviewed, leading to a significant increased credit risk in stage 3.Of the total impairment charges for CIB, an amount of EUR 629 million was attributable to three exceptional client files. The other impairment charges related to other individual client files and were mostly recorded in the oil and gas and energy-offshore sectors.

Additions for Commercial Banking amounted to EUR 542 million (2019: EUR 182 million). The main contributions related to individual client files in the food and shipping sectors, and to a lesser extent to new inflow from industrial goods and services and the travel and leisure sector. In addition, management overlays were recorded for CB to incorporate risk not adequately captured by the models. The ECL outcomes would not appear to represent deteriorations that had been expected for individual counterparties, given that payment moratoria and government support measures had a positive effect on clients' payment behaviour. An increase in impairment charges was also observed because of the transfer of clients from stage 1 to stage 2, with almost all CB clients being individually assessed during 2020 after the effects of Covid-19 became apparent. Some of these clients, mainly in the food, travel and leisure and real estate sectors, were transferred to stage 3 in 2020.

Impairment charges for consumer loans amounted to EUR 92 million (2019: EUR 50 million). The main additions were attributable to the economic impact of Covid-19, with clients being transferred to stage 2 due to a significant increased credit risk. The main client groups impacted were dentists, physiotherapists and pilots. During 2020, the various client groups were re-evaluated, and some of them were transferred back to stage 1. The new definition of default also resulted in higher impairments in 2020 because of some Retail Banking clients being transferred to stage 3.

A release of EUR 18 million was recorded for residential mortgages in 2020 (2019: EUR 31 million). This release was mainly attributable to the third quarter of the year. At that time, the 12-month PD deterioration was still being used as a proxy for lifetime PD deterioration. This proxy is more sensitive to steep economic downturns and to the subsequent recovery seen in later quarters. This resulted in a transfer from stage 2 to stage 1 in Q3. In addition, a release was recorded for interest-only mortgages. These releases were partly offset by increases resulting from transfers to stage 2 at the start of Covid-19, and from model refinements, including implementation of lifetime PD, and related mainly to stage 3.

In its 2020 annual report, Barclays PLC provided a decomposition of Stage 2 exposures and ECL allowance by trigger.

**Extract 29[40]: Barclays PLC, Annual Report 2020 – Credit risk – Stage 2 decomposition** *France*

## Stage 2 decomposition

**Loans and advances at amortised cost[a]**

| As at 31 December | 2020 Gross exposure £m | 2020 Impairment allowance £m | 2019 Gross exposure £m | 2019 Impairment allowance £m |
|---|---|---|---|---|
| Quantitative test | **36,754** | **3,252** | 24,034 | 2,059 |
| Qualitative test | **11,865** | **273** | 12,733 | 278 |
| 30 days past due backstop | **2,387** | **39** | 1,467 | 36 |
| **Total Stage 2** | **51,006** | **3,564** | 38,234 | 2,373 |

**Note**

a Where balances satisfy more than one of the above three criteria for determining a significant increase in credit risk, the corresponding gross exposure and ECL has been assigned in order of categories presented.

Stage 2 exposures are predominantly identified using quantitative tests where the lifetime PD has deteriorated more than a pre-determined amount since origination during the year driven by changes in macroeconomic variables. This is augmented by inclusion of accounts meeting the designated high risk criteria (including watchlist) for the portfolio under the qualitative test. Qualitative tests predominantly include £8.5bn (2019: £9.3bn) in Barclays UK of which £7.1bn (2019: £7.4bn) relates to UK Home Finance, £1.0bn (2019: £1.1bn) relates to Business Banking and £0.1bn (2019: £0.4bn) relates to Barclaycard UK. A further £3.3bn (2019: £3.4bn) relates to Barclays International of which £2bn (2019: £1.7bn) relates to Corporate and Investment Bank, £0.3bn (2019: £0.9bn) relates to Barclaycard International and £0.7bn (2019: £0.7bn) relates to Private Bank.

A small number of other accounts (1% of impairment allowances and 5% of gross exposure) are included in Stage 2. These accounts are not otherwise identified by the quantitative or qualitative tests but are more than 30 days past due. The percentage triggered by these backstop criteria is a measure of the effectiveness of the Stage 2 criteria in identifying deterioration prior to delinquency. These balances include items in the Corporate and Investment Bank for reasons such as outstanding interest and fees rather than principal balances.

For further detail on the three criteria for determining a significant increase in credit risk required for Stage 2 classification, refer to Note 7.

[40] *Barclays PLC, Annual Report 2020, Risk Management, Credit Risk, page 179.*

In its 2020 annual report, Lloyds Banking Group provided a description of its SICR triggers including the impact of payment holidays.

***Extract 30[41]: Lloyds Banking Group, Annual Results 2020 – Significant increase in credit risk*** *United Kingdom*

**Significant increase in credit risk**

Performing assets are classified as either Stage 1 or Stage 2. An ECL allowance equivalent to 12 months expected losses is established against assets in Stage 1; assets classified as Stage 2 carry an ECL allowance equivalent to lifetime expected losses. Assets are transferred from Stage 1 to Stage 2 when there has been a significant increase in credit risk (SICR) since initial recognition. Credit impaired assets are transferred to Stage 3 with a lifetime expected losses allowance. The Group uses both quantitative and qualitative indicators to determine whether there has been a SICR for an asset. For Retail, the following tables set out the Retail Master Scale (RMS) grade triggers which result in a SICR for financial assets and the PD boundaries for each RMS grade. Credit cards SICR triggers have been refined in 2020 following a review of sensitivity to changes in economic assumptions, 2019 triggers were previously aligned

to Loans and overdrafts. The impact of this has been approximately £1.4 billion of additional assets being classified as Stage 2 at 31 December 2020, with a corresponding increase in the ECL of £48 million resulting from the transfer to a lifetime expected loss.

**SICR Triggers for key Retail portfolios**

| Origination grade | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Mortgages SICR grade | 5 | 5 | 6 | 7 | 8 | 9 | 10 |
| Credit cards SICR grade | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Loans and overdrafts SICR grade | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

| RMS grade | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PD boundary % | 0.10 | 0.40 | 0.80 | 1.20 | 2.50 | 4.50 | 7.50 | 10.00 | 14.00 | 20.00 | 30.00 | 45.00 | 99.99 | 100.00 |

For Commercial a doubling of PD with a minimum increase in PD of 1 per cent and a resulting change in the underlying grade is treated as a SICR.

The Group uses the internal credit risk classification and watchlist as qualitative indicators to identify a SICR. The Group does not use the low credit risk exemption in its staging assessments. The use of a payment holiday in and of itself has not been judged to indicate a significant increase in credit risk, nor forbearance, with the underlying long-term credit risk deemed to be driven by economic conditions and captured through the use of forward-looking models. These portfolio level models are capturing the anticipated volume of increased defaults and therefore an appropriate assessment of staging and expected credit loss. During 2020, the Group has granted payment holidays on Retail loans and advances, £6.4 billion remained in place at 31 December 2020, £4.3 billion of these balances were classified as Stage 1. If all of these assets were classified as Stage 2, the Group's ECL would have been less than £50 million higher.

All financial assets are assumed to have suffered a SICR if they are more than 30 days past due; non-mortgage Retail financial assets are also assumed to have suffered a SICR if they are in arrears on three or more separate occasions in a rolling twelve month period. Financial assets are classified as credit impaired if they are 90 days past due except for UK mortgages where a 180 days backstop is used.

A Stage 3 asset that is no longer credit-impaired is transferred back to Stage 2 as no cure period is applied to Stage 3. If an exposure that is classified as Stage 2 no longer meets the SICR criteria, which in some cases include a minimum cure period, it is moved back to Stage 1.

The setting of precise trigger points combined with risk indicators requires judgement. The use of different trigger points may have a material impact upon the size of the ECL allowance. The Group monitors the effectiveness of SICR criteria on an ongoing basis.

[41] *Lloyds Banking Group plc, Annual Report and Accounts 2020, Notes to the Consolidated financial statements, Note 3. Critical accounting judgements and estimates, pages 231 - 232.*

Within its credit risk disclosures in its 2020 annual report, NatWest provided a decomposition of Stage 2 exposures including arrears status and explanatory comments in respect of contributing factors.

**Extract 31[42]: NatWest Group, Annual Report and Accounts 2020 – Credit risk disclosures – Stage 2 decomposition** *United Kingdom*

**Stage 2 decomposition – arrears status and contributing factors**

The tables below show Stage 2 decomposition for the Personal and Wholesale portfolios.

| 2020 | UK mortgages Loans £m | UK mortgages ECL £m | RoI mortgages Loans £m | RoI mortgages ECL £m | Credit cards Loans £m | Credit cards ECL £m | Other Loans £m | Other ECL £m | Total Loans £m | Total ECL £m |
|---|---|---|---|---|---|---|---|---|---|---|
| Personal | | | | | | | | | | |
| Currently >30 DPD | 426 | 19 | 109 | 11 | 10 | 6 | 75 | 25 | 620 | 61 |
| Currently <=30 DPD | 27,477 | 209 | 1,559 | 80 | 1,365 | 219 | 3,331 | 427 | 33,732 | 935 |
| *- PD deterioration* | *13,136* | *163* | *664* | *42* | *901* | *167* | *2,242* | *354* | *16,943* | *726* |
| *- PD persistence* | *9,977* | *22* | *46* | *2* | *350* | *32* | *966* | *57* | *11,339* | *113* |
| *- Other driver (adverse credit, forbearance etc)* | *4,364* | *24* | *849* | *36* | *114* | *20* | *123* | *16* | *5,450* | *96* |
| Total Stage 2 | 27,903 | 228 | 1,668 | 91 | 1,375 | 225 | 3,406 | 452 | 34,352 | 996 |

**Key points**

- The deteriorated economic outlook, including forecast increases in unemployment, resulted in increased account level IFRS 9 PDs. Consequently, compared to 2019, a larger proportion of accounts exhibited a SICR causing Stage 2 exposures to increase significantly.
- In the absence of PD deterioration or other backstop SICR triggers, the granting of a COVID-19 related payment holiday did not automatically result in a migration to Stage 2.
- However, a subset of customers who had accessed payment holiday support, and where their risk profile was identified as relatively high risk, were collectively migrated to Stage 2. For mortgages, in Retail Banking, approximately £1 billion of exposures were collectively migrated from Stage 1 to Stage 2, and approximately £340 million in Ulster Bank RoI. The impact of collective migrations on unsecured lending was much more limited.
- As expected, ECL coverage was higher in accounts that were more than 30 days past due than those in Stage 2 for other reasons.

[42] *NatWest Group plc*, *Annual Report and Accounts 2020*, Capital and risk management: Credit risk - Banking activities, page 203. The bank presented comparatives for 2019 which have not been included in this illustrative extract.

In its 2020 consolidated financial statements, UBS AG provided information in respect of the qualitative and quantitative factors affecting SICR assessment.

**Extract 32[43]: UBS Group AG, Annual report 2020, Consolidated financial statements – Significant increase in credit risk** *Switzerland*

As explained in Note 1a, the assessment of an SICR considers a number of qualitative and quantitative factors to determine whether a stage transfer between stage 1 and stage 2 is required. The primary assessment considers changes in probability of default (PD) based on rating analyses and economic outlook. Additionally, UBS considers counterparties that have moved to a credit watch list and those with payments that are at least 30 days past due.

**Stage 2 classification by trigger**

| | ECL allowances / provisions as of 31 December 2020 | | | |
|---|---|---|---|---|
| *USD million* | Stage 2 | *of which: PD layer* | *of which: watch list* | *of which: ≥30 days past due* |
| On-and off-balance sheet | (333) | *(252)* | *(41)* | *(40)* |
| *of which: Private clients with mortgages* | *(93)* | *(83)* | *0* | *(11)* |
| *of which: Real estate financing* | *(53)* | *(45)* | *(2)* | *(6)* |
| *of which: Large corporate clients* | *(110)* | *(89)* | *(20)* | *0* |
| *of which: SME clients* | *(38)* | *(16)* | *(16)* | *(5)* |
| *of which: Financial intermediaries and hedge funds* | *(19)* | *(19)* | *0* | *0* |
| *of which: Loans to financial advisors* | *(5)* | *0* | *(1)* | *(4)* |
| *of which: Credit cards* | *(14)* | *0* | *0* | *(14)* |
| *of which: Other* | *(2)* | *0* | *(2)* | *0* |

[43] *UBS Group AG, Annual report 2020, Consolidated financial statements,* Note 20 Expected credit loss measurement – page 342.

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