FINANCIAL PERFORMANCE OF EUROPEAN BANKS IN THE CONTEXT OF THE COVID-19 CRISIS - APPENDICES

EXTRACTS FROM H1 2020 INTERIM FINANCIAL STATEMENTS

September 2020

MAZARS

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3.2

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3.2.1 ECL CHARGE: THE IMPACT OF COVID-19

MAZARS INSIGHTS:

- **Barclays** explained and quantified the impact to COVID-19 on its ECL charge for H1 2020.

Drivers of loan impairment charge

	Q120 £m	Q220 £m	Total £m
Impairment charge generated using scenarios before COVID-19	370	424	794
Single name wholesale loan charges	405	186	591
Loan impairment charge prior to impact of COVID-19 scenarios	**775**	**610**	**1,385**
Impact of COVID-19 scenarios and weights	1,190	1,163	2,353
Specific charge in respect of exposures to selected sectors	300	(150)	150
Incorporation of provision for UK economic uncertainty	(150)	-	(150)
Total loan impairment charge	**2,115**	**1,623**	**3,738**

The impact of the COVID-19 scenarios and weighting adjustments has resulted in a £2,353m increase in ECL from the pre-COVID scenarios, primarily driven by forecasts for a prolonged period of UK and US unemployment.

Estimated effects from the significant support measures provided by Barclays, central banks and governments across the Group's key markets as a result of the COVID-19 pandemic have been factored into the calculation of the Group's loan impairment charge.

The £300m provision taken in Q120 in respect of oil price risk has been released given the Q2 rebound in oil prices and residual risk on the energy sector has been recognised in a Q2 charge of c.£150m under the COVID-19 scenarios and weights. A specific charge of £150m in respect of exposures to selected sectors represents additional provisions taken in Q220 in response to the current slowdown, in particular in the hospitality and retail sectors.

The £150m provision for UK economic uncertainty held at the year-end was incorporated within the updated scenarios in Q1.

Source: Barclays PLC, Interim results announcement at 30 2020, p. 36

3.2.2 POST-MODEL ADJUSTMENTS AND MANAGEMENT OVERLAYS – 1/8

MAZARS INSIGHTS:

- Post-model adjustments have led to a decrease of ECL at HSBC at H1 2020 (see the extract) because of their stated "overly conservative" initial model outputs.

Model risk

The economic consequences of the Covid-19 outbreak on macroeconomic variables that are used in models are outside of the bounds for which IFRS 9 models have been built and calibrated to operate. Moreover, the complexities of current governmental support programmes and regulatory guidance on the treatment of customer impacts, such as forbearance, payment holidays and the unpredictable pathways of the Covid-19 outbreak, have not previously been factored into the modelling. Consequently, IFRS 9 models under the current economic conditions are generating outputs that do not accurately assess the actual level of credit quality. Therefore, overlays based on expert analysis are necessary to reflect ECL.

In the short term, the focus is on refining model inputs and outputs in a consistent and explainable manner, including the use of model overlays. Wider ranging model changes for risk and loss models will take time to develop and need more real data on which models can be trained to be meaningful. Given the remaining significant uncertainties of Covid-19 and its impacts, it is too early to determine if model recalibration or redevelopment will be required.

Source: HSBC Holdings plc Interim Report 2020, p. 53

Post-model adjustments

In the context of IFRS 9, post-model adjustments are short-term increases or decreases to the ECL at either a customer or portfolio level to account for late breaking events, model deficiencies and expert credit judgement applied following management review and challenge. We have internal governance in place to regularly monitor post-model adjustments and, where possible, to reduce the reliance on these through model recalibration or redevelopment, as appropriate. Depending on the path of the Covid-19 outbreak and the shape of the economic recovery, we anticipate the composition of modelled ECL and post-model adjustments may be revised significantly over 2020, particularly when the economy resumes positive GDP growth and the uncertainty over long-term unemployment abates.

Post-model adjustments made in estimating the reported ECL at 30 June 2020 are set out in the following table. The table includes adjustments in relation to data and model limitations resulting from Covid-19 economic conditions, 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.

Net post-model reductions in ECL ($bn)	Retail	Wholesale	Total
Low-risk counterparties and economies (banks, sovereigns and government entities)	0.4	1.1	1.5
Corporate lending adjustments	–	2.8	2.8
Retail lending adjustments	0.2	–	0.2
Total	0.6	3.9	4.5

Post-model adjustments at 31 December 2019 were an increase of $75m for the wholesale portfolio and $131m for the retail portfolio.

Source: HSBC Holdings plc Interim Report 2020, p. 60

3.2.2 POST-MODEL ADJUSTMENTS AND MANAGEMENT OVERLAYS – 2/8

MAZARS INSIGHTS:

- **Commerzbank** recorded post-model / top-level adjustments to reflect the unprecedented nature of the crisis.

1 The risk result increased significantly compared with the first half of 2019. The main reasons for this are effects of the coronavirus pandemic totalling €–315m (of which €–154m are in the form of a top-level adjustment, hereinafter referred to as a "TLA") and the default of a large exposure in the Corporate Clients segment.

2 The risk result was €–795m in the reporting period, compared with €–256m a year earlier. The significant increase was due in part to a top-level adjustment (TLA) totalling €–154m that was made because of the coronavirus pandemic. Further information on the TLA can be found in the Interim Risk Report on page 20 ff and in the interim financial statements in Note 26. The risk result in the Private and Small-Business Customers segment was significantly higher than in the previous year. The increase was largely due to the effects from the coronavirus pandemic. The TLA charge for the period under review amounted to €–70m. In the Corporate Clients segment, the increase in the risk result compared to the first half of 2019 was due in part to the default of a large exposure in the second quarter. The segment was also burdened by the effects of the coronavirus pandemic. In some cases, the charges resulted from larger individual counterparties where the effects of the crisis were the main reason for default or which required an increase in existing risk provisions. The TLA charge for the period under review amounted to €–82m.

Source: Commerzbank, Interim report as at 30 June 2020, p. 20

Source: Commerzbank, Interim report as at 30 June 2020, p. 8

3 As a rule, the Group estimates the risk parameters specific to IFRS 9 based not only on historical default information but also, in particular, on the current economic environment (point-in-time perspective) and forward-looking information. This assessment primarily involves reviewing the effects which the Bank's macroeconomic forecasts will have regarding the amount of the ECL, and including these effects in the determination of the ECL.

A baseline scenario is used for this purpose which relies on the respective applicable consensus (forecasts of different banks on significant macroeconomic factors, such as GDP growth and the unemployment rate). This baseline scenario is then supplemented with additional macroeconomic parameters that are relevant for the model. In the current reporting period, the baseline scenario was prepared taking into account the ECB forecast of 4 June 2020. For mBank, the adjustment to a scenario specific to Poland was done locally. The transformation of the macroeconomic baseline scenario into effects on the risk parameters is based on statistically derived models. Giving consideration to the current situation, we have ensured that the relevant experts are sufficiently involved within the framework of the existing policies. Potential effects from non-linear correlations between different macroeconomic scenarios and the ECL are corrected using a separately determined adjustment factor. The appropriateness of this adjustment factor as at the reporting date was checked and verified.

When calculating the expected credit loss, additional effects may also have to be taken into account resulting from scenarios or events that are not reflected in the IFRS 9 ECL parameter set presented as part of the modelling (these may relate to singular events such as substantial political decisions or military conflicts); for these additional effects, a separately determined adjustment to the result from the IFRS 9 ECL model is made. The examination as to whether such top level adjustments with the involvement of senior management are necessary, as well as their possible implementation, are regulated in a policy.

Such an adjustment to the results of the IFRS 9 ECL model was deemed necessary in the first quarter of 2020 due to the coronavirus pandemic. As that time, the parameters used in the standard model reflected neither the economic effects of the global lockdowns nor the massive support and assistance measures taken by governments and institutions. This top-level adjustment was reviewed in the second quarter of 2020 in terms of its necessity and adequacy. The review took into account the extent to which the effects of the crisis were already sufficiently reflected in the parameters used in the ECL calculation, especially for the assumptions regarding the macroeconomic environment. The baseline scenario used in the second quarter of 2020 for the ECL calculation giving consideration to the ECB publication already reflects the anticipated effects of the coronavirus pandemic. It includes the following material assumptions:

Source: Commerzbank, Interim report as at 30 June 2020, p. 70-71

3.2.2 POST-MODEL ADJUSTMENTS AND MANAGEMENT OVERLAYS – 3/8

MAZARS INSIGHTS:

- **ING Group** recorded **management adjustments** of €90 million to reflect the risks which are not yet adequately covered in their IFRS 9 models, them being:
  - potentially more unemployment and business insolvencies after the phasing out of support measures such as payment holidays,
  - and the impact of oil price decrease on the upstream Reserve Based Lending book in the US.
- **Crédit Agricole** mentioned potential adjustments of forward looking data at local level, without providing more details

Sector and local scenarios: As indicated above, sector supplements established at the local level (forward-looking local) by certain Group entities may supplement the macroeconomic scenarios defined centrally.

Source: Crédit Agricole, Condensed interim consolidated financial statements as at 30 June 2020, p. 20

Management adjustments (*)

In times of volatility and uncertainty where the portfolio quality and economic environment is rapidly changing, models alone may not be able to accurately predict losses. In these cases management adjustments can be applied to appropriately reflect ECL. Adjustments can also be applied where the impact of the updated macroeconomic scenarios is over- or under-estimated by the IFRS 9 models.

As mentioned above, per the guidance from EBA, Covid-19 related payment holidays should not be regarded as an automatic forbearance trigger, and hence, should not automatically trigger recognition of lifetime ECL.

Looking forward, it is expected that the phasing out of the Covid-19 related payment holiday schemes and other support measures in the second half of 2020 could potentially lead to more business insolvencies and unemployment. This could lead to more clients that have currently taken payment holidays, getting into financial difficulties and to higher levels of defaults. To the extent ING believes that this elevated risk is not yet covered in the IFRS9 models, a management adjustment has been recognised.

This management adjustment has been recognised for SME portfolios as these portfolios are considered to be most at risk and have the highest percentage of customers requesting payment holidays compared to other portfolios. ING has recognised a management adjustment of €45 million in Netherlands and €15 million in Belgium as they are the largest SME portfolios and not significantly impacted by ME forecasts updates.

In addition, as oil price remains volatile, as well as exposed to the impacts of the Covid-19 crisis and subject to political decisions, ING recognised a management adjustment for the upstream oil book of €30 million.

Source: ING Group, Condensed consolidated interim financial information for the period ended 30 June 2020, p. 18

3.2.2 POST-MODEL ADJUSTMENTS AND MANAGEMENT OVERLAYS – 4/8

MAZARS INSIGHTS:

- **Société Générale** made a detailed description of their in-model adjustments (compared to the previous period's methodology) that are related to COVID-19 (1).
- They also distinguished additional adjustments (sector adjustments and adjustments on the outstanding loans under simplified approach) (2).

MODELS ADJUSTMENTS

The models used so far for estimating the expected credit losses were unable to reflect exactly the economic uncertainties related to the current crisis in the determination of future default rate.

The Group has consequently made some adjustments in its models to better reflect the impact of scenarios on the expected credit losses.

These adjustments focused primarily on the macroeconomic variables used to calibrate the probabilities of default.

- **GDP adjustment**

The lockdown measures taken by governments have caused a sharp drop in economic activity which is reflected in significant volatility in the quarterly GDP growth rates (year-on-year) in the forecasts for the years 2020 and 2021 in the countries in which 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 quality of credit portfolios and that of activity, the first being delayed with respect to the second.

In order to take this time-lag into account, the Group has revised its models and retained for 2020 and 2021 the (logarithmic) average of the variations in GDP compared to a base 100 in 2019. For example, for France, if we use a GDP at 94.2 in 2020 then 99.9 in 2021 in the central SG Base scenario, GDP will be smoothed to 96.8 over these two years.

This adjustment is applied to each of the four scenarios (SG Quick Exit, SG Base, SG Prolonged and SG Tail Risk) for the GDP series used to model expected credit losses (see paragraph 5 of Note 1).

Source: Société Générale, Consolidated Financial Statements – 30.06.2020, p. 44-45

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SECTOR ADJUSTMENTS

The different models used to estimate the expected credit losses may be supplemented by sector adjustments that increase or decrease the amount of expected credit losses. These adjustments allow to better anticipate defaults or recoveries in certain cyclical sectors. During the second quarter, these adjustments have been reviewed and supplemented to take into account the specific risk on sectors particularly affected by the Covid-19 crisis. The total sector adjustments amount to 344 million euros as at 30 June 2020 (244 million euros as at 31 December 2019).

ADJUSTMENTS ON THE OUTSTANDING LOANS UNDER SIMPLIFIED APPROACH

For the entities whithout any 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 129 million euros as at 30 June 2020 (78 million euros as at 31 December 2019).

1

The table below shows the adjusted GDP growth rates used in the models used to estimate expected credit losses (in percentages):

Combination of the 4 scenarios after adjustments:

	2019	2020	2021	2022	2023	2024
Euro Zone	1.2	(5.8)	(5.8)	0.5	1.0	1.4
France	1.3	(4.6)	(4.6)	0.6	1.0	1.4
United-States	2.3	(5.2)	(5.2)	0.8	1.6	2.1
China	6.1	2.7	2.7	4.4	4.5	4.5

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

In France, the economic shock linked to the pandemic led to a drop of the profit margin of companies. According to the Group's economists, this deteriorated margin rate does not however take sufficient account of State support measures to reduce their financial difficulties, particularly through the *PGE* mechanism. To better reflect the impact of these measures, an add-on of 1.2 point margin has been included in the margin rate of French companies into all scenarios for 2020. However, no add-on was applied over the remainder of the forecast horizon for expected credit losses.

It should be noted that if the government were to end part of the support measures put in place in the second quarter of 2020, the Group would have to scale down the add-on to the margin rate of French companies.

In addition to the adjustments on macroeconomic variables, corrections were made to the probabilities of default retained for certain scopes (15% decrease by expert opinion), the Group considering that the data from the models on these scopes were overestimated compared to expectations.

As at 30 June 2020, the adjustments thus made to the macroeconomic variables and probabilities of default led the Group to reduce the amount of impairment and provisions for credit risk by 236 million euros.

3.2.2 POST-MODEL ADJUSTMENTS AND MANAGEMENT OVERLAYS – 5/8

MAZARS INSIGHTS:

- **Barclays** recorded **management adjustments** of -1 166 million £ which give rise to a significant reduction in their ECL allowance. This adjustment aims to reflect the estimated impacts from support measures provided by Barclays, central banks and governments across the group's key markets as a result of the COVID-19 pandemic.

Credit Risk

ECL under 100% weighted scenarios for modelled portfolios

Reconciliation to total ECL	£m
Total model ECL	9,842
ECL from individually assessed impairments on stage 3 loans	1,026
ECL from non-modelled and other management adjustments[1]	(1,166)
Total ECL	**9,702**

1 *Management adjustments of £1.2bn materially reflect estimated impacts from the significant support measures provided by Barclays, central banks and governments across the Group's key markets as a result of the COVID-19 pandemic. Some impacts from these support measures are recognised in the COVID-19 scenarios used to calculate modelled ECL. However, given the uncertain economic environment and the unprecedented policy response to the pandemic, management have reviewed the output of the models across key portfolios to assess the appropriateness of the total ECL and to more fully estimate the impact given the longevity of support measures. Such assessments are inherently uncertain and actual credit losses may differ from the ECL depending on the evolution of the COVID-19 pandemic.*

Source: Barclays PLC, Interim results announcement at 30 2020, p. 36-38

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3.2.2 POST-MODEL ADJUSTMENTS AND MANAGEMENT OVERLAYS – 6/8

MAZARS INSIGHTS:

- **Santander** mentioned a significant provision overlay of 1 600 m€ without providing further details as to how this amount has been determined.

GRUPO SANTANDER RESULTS

➔ Evolution of results compared to the first half of 2019

▶ Impairment or reversal of impairment of financial assets not measured at fair value through profit or loss (net)

Impairment or reversal of impairment on financial assets not measured at fair value through profit or loss (net) was EUR 7,030 million, up 61% year-on-year in euros and 76% in constant euros.

Loan-loss provisions included in this item amounted to EUR 7,027 million, 63% more than in the same period last year. Stripping out the effect of exchange rates, the increase was 78%, heavily impacted by the effects of the COVID-19 and growth in credit volumes. This includes the provisions overlay of EUR 1,600 million which was recorded in the first quarter and which was been allocated by business unit.

Accordingly, the Group's cost of credit, calculated as the ratio of loan-loss provisions over the last twelve months to the average investment in the period, increased to 1.26% (1.46% considering the annualised year-to-date provisions).

It should also be noted that the EUR 1.6 billion provisions overlay recorded in first quarter has been allocated across our different markets. This allocation is distributed according to the size of each of our local banks, their loan portfolio characteristics and the potential economic and financial impact of the health crisis in each geography.

Source: Santander, Financial report – 1st half 2020, p. 13, p. 22

3.2.2 POST-MODEL ADJUSTMENTS AND MANAGEMENT OVERLAYS – 7/8

MAZARS INSIGHTS:

- **Deutsche Bank** discloses having recorded an overlay /increase of the ECL provision for H1 2020 (equal to max. 172 m€ to our understanding, based on the extracts presented on this slide)
- The overlay has been decided upon by management. It aims to “correct” the ECL models’ output estimation in relation to some “weak” forward-looking data (GDP and unemployment rate forecasts and overall economic effects related to COVID-19)

IFRS 9 impairment approach

Forward-looking information

The general use of forward-looking information, including macro-economic factors, as well as adjustments taking into account extraordinary factors, are monitored by the Group's Risk and Finance Credit Loss Provision Forum. In certain situations, Credit Risk officers and senior management may have additional information in relation to specific portfolios to indicate that the statistical distribution used in the ECL calculation is not appropriate. In such situations, the Group would apply a judgmental overlay.

As explained in Chapter “Measures in context of COVID-19 pandemic” in the interim management report, the Bank has decided to perform an overlay to address substantial uncertainty about the impact of the COVID-19 pandemic on the economy, to overcome the weakness of the Forward Looking Information (FLI) model in the current economic environment and to reflect regulatory guidance and financial support to the industry.

The overlay calculation uses a 3 year average of the GDP and unemployment forecasts as presented in the table above for the base scenario (versus a four quarter averaging of the first and second year under normal circumstances), which is used for calculating point-in-time (PIT) rating migration matrices. In line with the Group's standard methodology, market rate forecasts are also used in the calibration of the PIT matrix for the next four quarters. A through-the-cycle matrix specifies rating migrations from 2022 onwards.

In addition, management decided to record a further management overlay to increase its ECL estimate to address the uncertainty on certain economic developments due to COVID-19 at the end of June 2020

Taking into account the above mentioned overlays, the Group reported provision for credit losses of € 761 million in the second quarter of 2020, which is a significant increase compared to € 161 million in the second quarter of 2019 and € 247 million in the fourth quarter of 2019. This change mainly reflecting the following effects: € 172 million from the inclusion of latest consensus forecast including the effects of the management overlays, € 79 million due to deteriorated input parameter into the ECL calculation especially adverse rating developments due to COVID-19 across all business units and € 510 million for defaulted clients.

Source: Deutsche Bank, Interim Report as of June 30 2020, p. 81-82

Measures in context of Covid-19 pandemic

IFRS 9 - Application of Forward Looking Information

Deutsche Bank incorporated consensus forecasts on macroeconomic variables as of June 30, 2020 into its second quarter of 2020 Expected Credit Loss “ECL” estimate. The bank's standard approach to the incorporation of these variables into the calculation of the ECL estimate is to incorporate forecasts for the next two years, using eight discrete quarterly observations. This methodology was derived during the implementation of IFRS 9 from observation of the historical relationship between movements in those macroeconomic variables and default rates.

In management's opinion this methodology does not provide a reliable indicator for future credit losses in the context of the COVID-19 crisis, as it takes too short a view of the development of those variables and hence overstates the impact of short term movements in them on estimated future credit losses. In particular, the current methodology does not factor in the beneficial impact of government support and assistance in response to the crisis, in particular for corporate obligors.

On April 1, 2020, ECB submitted a letter to banks with regard to the use of Forward Looking Information in the context of IFRS 9 that stated, amongst other things, that banks should “use the long-term forecast (e.g. the long-term GDP growth rate) whenever the specific forecast has lost relevance”.

Based on Deutsche Bank's assessment and the regulatory guidance provided, the most representative approach in the current quarter to estimating future credit losses is to reduce the weight of some of the short-term data and derive adjusted inputs based on longer term averages.

The Bank has therefore performed an overlay calculation based on averaging forecasts for GDP and unemployment rates over the next three years in its ECL estimation which is the basis for the bank's second quarter of 2020 Credit Loss Allowance.

Management is closely monitoring the development of consensus forecast data and will reassess the need for continuing with the application of this management overlay also in the third quarter of 2020.

In addition, management decided to record a further management overlay to increase its ECL estimate to address the uncertainty on certain economic developments due to COVID-19 at the end of June 2020.

For further details, please refer to Chapter “IFRS 9 impairment approach” in the interim financial statements.

Source: Deutsche Bank, Interim Report as of June 30 2020, p. 37

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3.2.2 POST-MODEL ADJUSTMENTS AND MANAGEMENT OVERLAYS – 8/8

MAZARS INSIGHTS:

- **UBS** has quantified in a rather granular way the sources of ECL charge increase due to COVID 19:
  - 127 m$ relate to the impact of update of forward-looking scenarios on exposures in Stage 1 and Stage 2
  - 75 m$ reflect the effects of expert judgement overlays for selected exposure in Stage 1 and Stage 2

Credit risk

Credit loss expense / recovery

Total net credit loss expenses were USD 272 million during the second quarter of 2020, compared with USD 268 million during the first quarter of 2020, reflecting net expenses of USD 202 million related to stage 1 and 2 positions and net expenses of USD 70 million related to credit-impaired (stage 3) positions.

Stage 1 and 2 net credit loss expenses of USD 202 million were primarily driven by a net expense of USD 127 million from an update to the forward-looking scenarios, factoring in updated macroeconomic assumptions to reflect the effects of the COVID-19 pandemic, in particular updated GDP and unemployment assumptions. This also led to exposure movements from stage 1 to stage 2 as probabilities of default increased.

The remaining stage 1 and 2 expenses of USD 75 million mainly reflect the effects of expert judgement overlays for selected exposures to Swiss large corporates and small and medium-sized entities, as well as remeasurements within our loan book, mainly in the Investment Bank. These were partly offset by recoveries on energy-related exposures and securities financing transactions with a number of real estate investment trusts, where we had increased allowances in the first quarter of 2020.

Stage 3 net credit loss expenses were USD 70 million. In the Investment Bank, stage 3 net expenses of USD 22 million were driven by USD 38 million of expenses recognized across various positions, partly offset by recoveries on securities financing transactions with a number of real estate investment trusts, where we had increased allowances in the first quarter of 2020. In Group Functions, stage 3 expenses of USD 20 million arose from an energy-related exposure in the Non-core and Legacy Portfolio. In Global Wealth Management, stage 3 net expenses of USD 19 million primarily reflected USD 9 million on a single structured margin-lending position, with the remaining USD 10 million on a number of smaller positions across the portfolios. In Personal & Corporate Banking, stage 3 net expenses of USD 10 million arose primarily on two newly defaulted clients in the corporate lending portfolio.

→ **Refer to "Note 10 Expected credit loss measurement" in the "Consolidated financial statements" section of this report for more information about credit loss expense / recovery**

→ **Refer to "Note 1 Summary of significant accounting policies" and "Note 23b Expected credit loss measurement" in the "Consolidated financial statements" section of the Annual Report 2019 for more information about the scenario updates**

Source: UBS, Second quarter 2020 report, p. 35

3.2.3 STAGING – WHAT CAN BE LEARNED ON TRANSFERS FROM THE RECONCILIATION TABLES (1/4)

MAZARS INSIGHTS:

- **ING Group** provides detailed information on transfers between stages, including:
  - **Narrative** explanations as to the reasons and extent of transfers, including explanations for sectors considered as the most affected by COVID-19
  - Separate lines on transfers for each stage in the reconciliation tables, thus allowing to have a notion of the direction / trend of transfers.

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

30 June 2020	12-month ECL (Stage 1)		Lifetime ECL not credit impaired (Stage 2)		Lifetime ECL credit impaired (Stage 3)		Total	
	Gross carrying amount	Provisions	Gross carrying amount	Provisions	Gross carrying amount	Provisions	Gross carrying amount	Provisions
Opening balance as at 1 January 2020	**817,247**	**490**	**41,082**	**881**	**10,955**	**3,275**	**869,284**	**4,645**
Transfer into 12-month ECL (Stage 1)	7,746	14	-7,401	-126	-346	-8		-120
Transfer into lifetime ECL not credit impaired (Stage 2)	-33,528	-50	33,948	522	-420	-46		426
Transfer into lifetime ECL credit impaired (Stage 3)	-2,136	-20	-2,144	-136	4,280	1,058		902
Net remeasurement of loan loss provisions		182		354		261		797
New financial assets originated or purchased	95,280	146					95,280	146
Financial assets that have been derecognised	-65,966	-43	-4,230	-66	-551	-73	-70,747	-182
Net drawdowns and repayments	44,955		1,522		-9		46,468	-
Changes in models/risk parameters		0						
Increase in loan loss provisions		**230**		**548**		**1,192**		**1,970**
Write-offs					-433	-433	-433	-433
Recoveries of amounts previously written off						19		19
Foreign exchange and other movements		-2		-17		-70		-89
Closing balance as at 30 June 2020	**863,599**	**717**	**62,777**	**1,412**	**13,476**	**3,983**	**939,852**	**6,112**

1 At the end of June 2020, the Gross carrying amounts included loans and advances to central banks (€116.9 billion), loans and advances to banks (€30.7 billion), financial assets at FVOCI (€37.0 billion), securities at amortised cost (€51.1 billion), loans and advances to customers (€622.7 billion) and financial guarantees (credit replacement) in scope of IFRS 9 impairment requirements (€112.7 billion) and excludes receivables related to securities in reverse repurchase transaction (€-13.4 billion), cash collateral in respect of derivatives (€-9.4 billion), the value adjustment hedged items (€-4.4 billion), a receivable that is offset by a liquidity facility (€-1.5 billion), on-demand bank balances (€-2.7 billion) and other differences amounting to €0.1 billion.
2 Stage 3 Lifetime credit impaired includes €5 million Purchased or Originated Credit Impaired.
3 At the end of June 2020, the stock of provisions included provisions for loans and advances to central banks (€5 million), loans and advances to banks (€13 million), financial assets at FVOCI (€13 million), securities at amortised cost (€21 million), provisions for loans and advances to customers (€6,029 million) and provisions for contingent liabilities (credit replacements) recorded under Provisions (€30 million).

Source: ING Group, Condensed consolidated interim financial information for the period ended 30 June 2020, p. 15

Note that a similar table is also provided for YE 2019 on p. 17 of the ING interim report.

3.2.3 STAGING – WHAT CAN BE LEARNED ON TRANSFERS FROM THE RECONCILIATION TABLES (2/4)

MAZARS INSIGHTS (ING EXAMPLE CTD.):

- **ING Group** provides detailed information on transfers between stages, including:
  - Narrative explanations as to the reasons and extent of transfers, including explanations for sectors considered as the most affected by COVID-19
  - Separate lines on transfers for each stage in the reconciliation tables, thus allowing to have a notion of the direction / trend of transfers.

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

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 represents 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 for the first half-year 2020:

- Stage 3 gross carrying amount increased by €2.5 billion from €10.9 billion as per 31 December 2019 mainly as a result of ING's introduction of a new definition of default which had an impact of €1.0 billion and due to developments with respect to certain large individual files. For further background on implementation of new Definition of Default, please refer to section 1.5 of the Condensed Consolidated Financial Statements.
- Stage 2 gross carrying amount increased by €21.6 billion from €41.1 billion as per 31 December 2019. This is mainly caused by the significant lifetime PD trigger (€8.4 billion), the Watchlist trigger (€4.0 billion), primarily in Wholesale Banking, and to a lesser extent Forbearance (€3.3 billion);
- 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 €4.7 billion, €2.1 billion, €2.0 billion and €1.7 billion respectively. These sectors represent 12%, 9%, 9% and 8% of the total Stage 2 gross carrying amounts respectively.
- The net remeasurement of loan loss provisions in Stage 1 and Stage 2 of €182 million and €354 million respectively and the transfer into lifetime ECL of €522 million were significantly impacted by the worsened macro-economic outlook, including management adjustments of €90 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.

Source: ING Group, Condensed consolidated interim financial information for the period ended 30 June 2020, p. 16

3.2.3 STAGING – WHAT CAN BE LEARNED ON TRANSFERS FROM THE RECONCILIATION TABLES (3/4)

MAZARS INSIGHTS:

- At 30 June 2020, **Crédit Agricole** presents the reconciliation tables (required by IFRS 7 at annual closing) at a **granular level:** in addition to the table on their main exposures, ie. loans and receivables from customers at amortised cost (extracted on this page), they also present similar tables for 5 other categories of exposures subject to ECL calculation.
- Little narrative explanations are provided to help readers better understand the changes / transfers between stages that took place during H1 2020, or compare to the trends observed in previous years.

FINANCIAL ASSETS AT AMORTISED COST: LOANS AND RECEIVABLES DUE FROM CUSTOMERS

	Performing assets				Credit-impaired assets (Bucket 3)		Total		
	Assets subject to 12-month ECL (Bucket 1)		Assets subject to lifetime ECL (Bucket 2)						
(in millions of euros)	Gross carrying amount	Loss allowance	Gross carrying amount	Loss allowance	Gross carrying amount	Loss allowance	Gross carrying amount (a)	Loss allowance (b)	Net carrying amount (a) + (b)
Balance at 31 December 2019	**845,325**	**(1,776)**	**64,163**	**(3,653)**	**22,999**	**(13,561)**	**932,487**	**(18,991)**	**913,496**
Transfers between buckets during the period	**(5,348)**	**(238)**	**2,757**	**543**	**2,591**	**(1,087)**	**-**	**(782)**	
Transfers from Bucket 1 to Bucket 2	(23,210)	130	23,210	(563)			-	(433)	
Return to Bucket 2 from Bucket 1	19,090	(397)	(19,090)	947			-	550	
Transfers to Bucket 3 [1]	(1,470)	33	(1,926)	203	3,396	(1,345)	-	(1,109)	
Return from Bucket 3 to Bucket 2 / Bucket 1	242	(4)	563	(44)	(805)	258	-	210	
Total after transfers	**839,978**	**(2,014)**	**66,919**	**(3,107)**	**25,590**	**(14,648)**	**932,487**	**(19,772)**	**912,715**
Changes in gross carrying amounts and loss allowances	**43,903**	**(237)**	**794**	**(773)**	**(2,393)**	**657**	**42,304**	**(352)**	
New financial production : purchase, granting, origination,renegociation... [2]	200,577	(520)	10,916	(655)			211,493	(1,175)	
Derecognition : disposal, repayment, maturity...	(155,755)	300	(10,031)	489	(1,400)	758	(167,186)	1,548	
Write-offs					(964)	883	(964)	883	
Changes of cash flows resulting in restructuring due to financial difficulties	(1)	-	(8)	1	(18)	9	(27)	10	
Changes in models' credit risk parameters during the period [5]		(33)		(632)		(1,054)	-	(1,719)	
Changes in model / methodology		-		17		-	-	17	
Changes in scope	273	(3)	28	(3)	40	(27)	341	(33)	
Transfers in non-current assets held for sale and discontinued operations	-	-	-	-	-	-	-	-	
Other	(1,191)	19	(111)	10	(51)	88	(1,353)	117	
Total	**883,881**	**(2,251)**	**67,713**	**(3,880)**	**23,197**	**(13,991)**	**974,791**	**(20,124)**	**954,666**
Changes in carrying amount due to specific accounting assessment methods (with no significant impact on loss allowance) [3]	120		(327)		618		411		
Balance at 30 june 2020 [4]	**884,001**	**(2,251)**	**67,386**	**(3,880)**	**23,815**	**(13,991)**	**975,202**	**(20,124)**	**955,078**
Contractual amount outstanding of financial assets written off during the period, that are still subject to enforcement measures	-		-		-		-		

[1] Transfers to Bucket 3 correspond to outstanding amounts initially classified as Bucket 1 which, during the year, were downgraded directly to Bucket 3, or to Bucket 2 and later to Bucket 3. The principles of bucket provisioning are presented in the Group's "Accounting policies and principles" and in the chapter "Risk factors – Credit risk".

[2] Originations in Bucket 2 could include some originated loans in Bucket 1 reclassified in Bucket 2 during the period.

[3] Includes the changes in fair value adjustments of micro-hedged instruments, the impacts relating to the use of the EIR method (notably the amortisation of premiums/discounts), the impacts of the accretion of discounts on restructured loans (recovered as revenues over the remaining term of the asset) and the impacts relating to the changes in accrued interest.

[4] As at 30 June 2020, as part of the economic support measures enacted in response to the COVID-19 health crisis, Crédit Agricole S.A. Group granted non-contractual deferred maturities on customer loans in the amount of €5.85 billion.

[5] Bucket 3: this line corresponds to changes in the assessment of credit risk on loans that are already in default.

Source: Crédit Agricole, Condensed interim consolidated financial statements as at 30 June 2020, p. 27

3.2.3 STAGING – WHAT CAN BE LEARNED ON TRANSFERS FROM THE RECONCILIATION TABLES (4/4)

MAZARS INSIGHTS:

- At 30 June 2020, **Groupe BPCE** also presents the reconciliation tables (required by IFRS 7 at annual closing) at a **granular level:** in addition to the table on their main exposures, i.e. loans and receivables from customers at amortised cost (extracted on this page), they also present similar tables for 5 other categories of exposures subject to ECL calculation.

7.1.3 Variation des pertes de crédit attendues sur actifs financiers et des engagements

7.1.3.4 Variation des pertes de crédit sur prêts et créances à la clientèle au coût amorti

	Statut 1		Statut 2		Statut 3		Actifs dépréciés dès leur origination ou leur acquisition (POCI)		TOTAL	
en millions d'euros	Valeur brute Comptable	Dépréciations pour pertes de crédit attendues	Valeur brute Comptable	Dépréciations pour pertes de crédit attendues	Valeur brute Comptable	Dépréciations pour pertes de crédit attendues	Valeur brute Comptable	Dépréciations pour pertes de crédit attendues	Valeur brute Comptable	Dépréciations pour pertes de crédit attendues
Solde au 31/12/2019	**618 123**	**(1 058)**	**66 306**	**(1 913)**	**20 926**	**(9 482)**	**711**	**(357)**	**706 067**	**(12 810)**
Production et acquisition	71 646	(244)	2 565	(31)	///	///	45	(22)	74 256	(298)
Décomptabilisation (remboursements, cessions et abandons de créances)	(28 918)	33	(2 732)	28	(1 300)	67	(26)		(32 977)	128
Réduction de valeur (passage en pertes)	///	///	///	///	(546)	496	(40)	40	(585)	536
Transferts d'actifs financiers	(1 085)	294	(1 633)	(286)	2 651	(416)	65	(16)	(1)	(425)
Transferts vers S1 [(1)]	*17 522*	*(113)*	*(17 359)*	*275*	*(307)*	*19*			*(144)*	*181*
Transferts vers S2	*(16 938)*	*306*	*17 826*	*(771)*	*(806)*	*79*	*(30)*	*14*	*52*	*(371)*
Transferts vers S3	*(1 669)*	*101*	*(2 099)*	*209*	*3 765*	*(514)*	*96*	*(31)*	*92*	*(235)*
Autres mouvements [(2) (3)]	(5 579)	(392)	(2 877)	94	998	(364)	9	(36)	(7 449)	(698)
Solde au 30/06/2020	**654 187**	**(1 366)**	**61 630**	**(2 108)**	**22 730**	**(9 700)**	**764**	**(392)**	**739 311**	**(13 566)**

(1) Dont un reclassement d'encours du statut 2 vers le statut 1 de 3 milliards d'euros par le groupe Natixis, lié à l'abandon du critère de dégradation de la notation d'un secteur comme motif de passage en stage 2.
(2) Les autres variations incluent l'amortissement des créances et variation des paramètres de risque de crédit (dont remboursements partiels), de la variation de change et les impacts liés à IFRS 5.
(3) Dont impact de la cession de la Coface pour 2 milliards d'euros.

L'évolution des encours de prêts et créances à la clientèle s'explique par les prêts garantis par l'état (PGE) pour 21,3 milliards d'euros au 30 juin 2020 (cf. note 1.5.1.1).

Les dépréciations pour pertes de crédit attendus dans le cadre de la crise sanitaire et calculées selon la méthode du forward looking (cf. note 1.5.2.1) s'élèvent à 553 millions d'euros au 30 juin 2020.

Source: Groupe BPCE, Consolidated IFRS financial statements as at 30 June 2020, p. 63

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 1/13

Measurement uncertainty and sensitivity analysis of ECL estimates

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.

Methodology

Our methodology in relation to the adoption and generation of economic scenarios is described on page 92 of the *Annual Report and Accounts 2019*. There have been no significant changes during the 1H20 period. While in keeping with HSBC's methodology, the exceptional nature of the current economic environment has led to extensive application of management's judgement in determining the range of possible outcomes, the number and severity of scenarios selected and the probability weights assigned.

Description of consensus 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 emergent nature of the Covid-19 outbreak at the end of 2019 meant that, consistent with other banks, HSBC's view of the distribution of risks, as disclosed in the *Annual Report and Accounts 2019*, did not, on a forward-looking basis, consider the impact of the virus. Our consensus 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 has led to a fundamental reassessment of our central forecast and the distribution of risks.

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 main factors that affect uncertainty across our key markets are:

- epidemiological concerns, including a possible resurgence of Covid-19 later in 2020 and in 2021;
- the ability of new or continued restrictions in individual markets to affect global growth due to deep cross-border trade and financial linkages;
- the ability of governments and central banks to continue to limit the economic damage through support measures;
- the potential for other geopolitical and macroeconomic risks to affect growth and economic stability as the world recovers from Covid-19-related restrictions; and
- market-specific differences in the progression of Covid-19 and the associated responses by public authorities that imply differentiation in the degree of uncertainty across our key markets. Earlier progression of Covid-19 in Hong Kong and in mainland China meant that economic forecasts for these markets demonstrated greater stability over the course of 2Q20 compared with the UK, where a rapidly evolving situation has led to a higher degree of uncertainty.

Economic forecasts and data released since the creation of scenarios in May confirmed the view of elevated uncertainty in some markets such as in the UK, where monthly GDP and unemployment data suggested a larger degree of estimation error than usual in short-term forecasts. The volatility in economic data and forecasts received since the generation of scenarios has been considered by management and is reflected in management's choice of scenarios, in probability weights and in its assessment of ECL outcomes.

The scenarios used to calculate ECL in the *Interim Report 2020* are described below.

The consensus Central scenario

HSBC's Central scenario features a 'V-shaped' shock to economic activity, as characterised by a deep, initial contraction in GDP, followed by a sharp recovery. This V-shape in activity reflects the unique nature of this downturn and is driven by restrictions on mobility and activity imposed by governments to reduce the spread of Covid-19. The Central scenario further assumes that the stringent restrictions on activity, employed across several countries and territories in the first half of 2020, will not be repeated, allowing economic activity to rebound. Minimal long-term damage to economic prospects is expected, allowing economic growth across our key markets to return to forecast trend rates. Cross-region differences in the depth of the contraction, and the speed and scale of subsequent recovery, reflect timing differences in the progression of the Covid-19 outbreak, national level differences in restrictions imposed and the scale of support measures.

Global GDP is expected to contract by 3.9% in 2020 and grow by 4.8% in 2021 in the Central scenario. The average rate of global GDP growth is expected to be 2.7% over the forecast period 2020–2025, which is slightly lower than the average growth rate over the 2015–2019 period.

The unique circumstances surrounding the current fall in economic activity make it difficult to compare current prospects for global economic activity with previous recessions. However, we note that the depth of the contraction in economic activity and the subsequent recovery are both expected to be sharper than experienced during the last global economic downturn of 2008–2009 across our key markets (see chart below).

Across the key markets, we note:

- Economic activity has fallen significantly in 1H20 across our major markets. The earlier outbreak of the virus in China and Hong Kong suggests that the trough in economic activity in these markets occurred in 1Q20, while in other major markets, the lowest point in activity is expected to have occurred in 2Q20. The Central scenario projects an annual contraction in GDP across almost all our major markets in 2020, the only exception being China, where annual GDP growth is expected to be positive, despite the strong fall in activity experienced in the first quarter of the year. GDP is expected to be positive across all our major markets in 2021.
- The unemployment rate is expected to rise sharply in most of our major markets, before reverting gradually to pre-crisis levels over the forecast horizon.

Source: HSBC Holdings plc Interim Report 2020, p. 57-58

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 2/13

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

Central scenario (3Q20–2Q25)

	UK %	US %	Hong Kong %	Mainland China %	Canada %	France %	UAE %	Mexico %
GDP growth								
Annual average growth rate: 2020	(7.8)	(5.2)	(4.8)	1.4	(7.1)	(8.7)	(2.7)	(7.4)
Annual average growth rate: 2021	5.9	4.1	4.2	8.1	5.5	7.2	3.1	2.5
1Q22–2Q25: average growth	1.9	2.4	2.3	5.3	2.1	1.7	3.0	2.3
3Q20–2Q22: worst quarter	(8.6) (3Q20)	(6.6) (3Q20)	(2.6) (3Q20)	3.3 (4Q21)	(8.2) (3Q20)	(8.9) (3Q20)	(2.9) (3Q20)	(8.8) (3Q20)
Unemployment rate								
Annual average: 2020	6.8	9.5	4.6	4.5	10	9.8	N/A	5.3
Annual average: 2021	6.3	7.3	4.1	4.2	8.1	10.0	N/A	5.1
1Q22–2Q25: average	4.7	5.6	3.7	3.9	6.5	8.9	N/A	4.5
3Q20–2Q22: worst quarter	8.1 (3Q20)	11.0 (3Q20)	4.8 (3Q20)	4.6 (3Q20)	11.1 (3Q20)	10.6 (3Q20)	N/A	6.1 (3Q20)
House price index								
Annual average growth rate: 2020	(2.2)	1.7	(7.9)	1.8	0.2	(0.5)	(13.0)	4.8
Annual average growth rate: 2021	0.9	(2.6)	0.4	2.6	2.1	(0.3)	(10.2)	2.9
1Q22–2Q25: average growth	3.7	2.3	3.4	5.4	3.4	3.4	2.1	5.3
3Q20–2Q22: worst quarter	(3.4) (4Q20)	(3.6) (2Q21)	(11.5) (3Q20)	1.3 (1Q21)	(4.0) (1Q21)	(3.9) (4Q20)	(18.2) (4Q20)	2.5 (1Q21)
10-year bond yield								
Annual average: 2020	0.5	0.9	1.2	N/A	0.8	0.0	N/A	7.1
Annual average: 2021	0.8	1.2	1.7	N/A	1.1	0.2	N/A	6.8
1Q22–2Q25: average	1.6	2.2	2.2	N/A	1.9	0.9	N/A	7.4
3Q20–2Q22: worst quarter	0.4 (3Q20)	0.8 (3Q20)	1.2 (3Q20)	N/A	0.7 (3Q20)	0.0 (3Q20)	N/A	6.6 (4Q21)
Probability	60	70	70	70	70	70	60	55

The range of macroeconomic projections across the various scenarios are shown in the table below:

Outer scenario ranges (3Q20–2Q25)

	UK %	US %	Hong Kong %	Mainland China %	Canada %	France %	UAE %	Mexico %
GDP growth	(8.3) to (16.7) (3Q20) (1Q21)	(6.0) to (12.8) (3Q20) (3Q20)	(1.5) to (15.8) (3Q20) (3Q20)	3.9 to (7.2) (4Q21) (3Q20)	(8.1) to (14.3) (3Q20) (2Q21)	(8.7) to (22.0) (3Q20) (3Q20)	(2.3) to (13.3) (3Q20) (2Q21)	(7.9) to (14.8) (3Q20) (1Q21)
Unemployment rate	8.0 to 10.5 (3Q20) (2Q21)	10.5 to 18.2 (3Q20) (3Q20)	4.5 to 8.0 (3Q20) (1Q21)	4.5 to 6.1 (3Q20) (1Q22)	11 to 19.5 (3Q20) (3Q20)	10 to 11.5 (3Q20) (1Q21)	N/A	5.8 to 7.3 (3Q20) (4Q21)
House price index	(2.8) to (24.7) (3Q20) (2Q21)	(1.7) to (15.6) (1Q21) (2Q21)	(10.3) to (26.3) (3Q20) (1Q21)	3.3 to (25.8) (3Q20) (3Q21)	(1.3) to (27.6) (3Q20) (2Q21)	(2.4) to (13.4) (4Q20) (3Q21)	(13.9) to (25.7) (3Q20) (2Q21)	3.2 to (16.0) (4Q20) (2Q21)
10-year bond yield	0.5 to (1.7) (3Q20) (3Q21)	0.8 to (0.2) (3Q20) (2Q21)	1.2 to (0.8) (3Q20) (1Q21)	N/A	0.7 to (0.2) (3Q20) (2Q21)	0.1 to (0.5) (3Q20) (2Q22)	N/A	7.2 to 10.2 (4Q20) (4Q20)
Consensus Upside scenario: Probability	10	5	5	10	10	10	0	5
Consensus Downside scenario: Probability	0	20	20	15	15	15	35	35
UK management Downside scenario: Probability	20							
Alternative Downside scenario: Probability	10	5	5	5	5	5	5	5

GDP growth: Historical comparison

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. Despite this feature, the scenario forecasts 2020 as a year in which global GDP growth contracts and several quarters elapse before economic activity reaches the level attained at the end of 2019, prior to the onset of the Covid-19 outbreak.

The scenario is consistent with a number of key upside risk themes. These include orderly global abatement of Covid-19 via successful containment and/or the development of a vaccine, deescalation of tensions between the US and China, continued support from fiscal and monetary policy, positive resolution of economic uncertainty in the UK, stronger oil prices and deescalation of geopolitical tensions in Hong Kong.

Probability weights assigned to the Upside scenario range from 0% to 10%. These weights reflect management's view of the potential for more positive outcomes relative to the Central scenario in our key markets.

The consensus Downside scenario

Global real GDP growth contracts significantly in 2020 in the Downside scenario, accompanied by a sharp increase in unemployment, and falls in asset and consumer prices, before gradually recovering towards its long-run trend. Compared with the Central scenario, the recovery in economic activity is considerably weaker.

The scenario is consistent with our key downside risks. These include renewed outbreaks of Covid-19 and/or slower easing of restriction of travel and activity, an intensification of tensions between the US and China, a worsening of economic uncertainty in the UK, further risks to economic growth in Hong Kong and weaker commodity prices.

A broad range of weights has been assigned to the consensus Downside scenario. These range from 0% to 35% and reflect management's view of the dispersion of risks and severity across key markets.

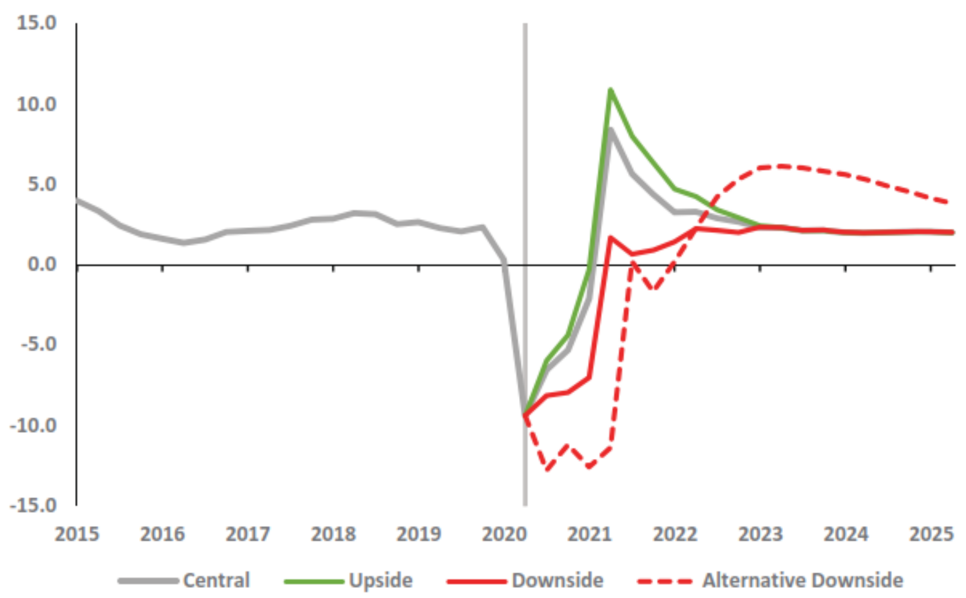
UK management Downside scenario

The consensus Downside scenario was replaced with a management Downside scenario for the UK only, to reflect management's view of the dispersion of risks. Management took the view that this scenario provided a better representation of risks that lie in between the Central and the alternative Downside scenario. In this scenario, UK GDP falls 9.6% in 2020 and UK unemployment peaks at 8.5% in 2021. This scenario has been assigned a 20% probability.

Alternative Downside scenario

An alternative Downside scenario has been created to reflect management's view of extreme risks. This 'U-shaped' scenario assumes that a number of HSBC's top risks crystallise simultaneously and results in an extremely severe and prolonged recession. This scenario has been assigned a 5% probability across all markets except the UK where it has been assigned a 10% weighting.

US GDP growth



Source: HSBC Holdings plc Interim Report 2020, p. 58-59

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 3/13

Credit Risk

Measurement uncertainty

The Group uses a five-scenario model to calculate ECL. Absent the conditions surrounding the COVID-19 pandemic, a Baseline scenario is typically generated based on an external consensus forecast 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). 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 typically calibrated to a similar severity to internal stress tests, whilst also considering IFRS 9 specific sensitivities and non-linearity Downside 2 is typically benchmarked to the Bank of England's annual cyclical scenarios and to the most severe scenario from Moody's inventory, but is not designed to be the same. The favourable scenarios are generally calibrated to be symmetric to the adverse scenarios, subject to a ceiling calibrated to relevant recent favourable benchmark scenarios. 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. To calculate ECL a probability weight is assigned to each scenario.

Following the onset of the COVID-19 pandemic, the Group generated a Baseline scenario in March 2020 that reflected the most recent economic forecasts available in the market (combined with internal assumptions) and estimated impacts from significant support measures taken by Barclays, central banks and governments across the Group's key markets. This scenario assumed a strong contraction in GDP and a sharp rise in unemployment in 2020 across both the UK and US, and required a recalibration of probability weights. This scenario was superseded by a further revised Baseline scenario generated in June 2020, based broadly on the latest economic forecasts which recognise some impacts from the various support measures still in place across the Group's key markets. Upside and downside scenarios were also regenerated in June 2020 (together with the revised Baseline scenario, the "COVID-19 scenarios"). The downside scenarios reflect slower economic growth than the Baseline with social distancing measures continuing to drag GDP. Economic growth begins to recover later in 2020 in Downside 1 but only in 2021 in the Downside 2 scenario. The upside scenarios reflect a faster rebound in economic growth than the Baseline with a sharp decrease in infection rates and an almost fully reopened economy. Scenario weights were also revised in June 2020 with greater weight being applied to the tail scenarios (Upside 2 and Downside 2). This reflects the significant range of uncertainty in the economic environment compared to previous quarters given the conditions surrounding the COVID-19 pandemic.

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 macroeconomic variables used in the COVID-19 Baseline scenario and the probability weights applied to each respective scenario.

Source: Barclays PLC, Interim results announcement at 30 2020, p. 32-33

Credit Risk

Baseline average macroeconomic variables used in the calculation of ECL

	2020 %	2021 %	2022 %	Expected Worst Point %
As at 30.06.20				
UK GDP[1]	(8.7)	6.1	2.9	(51.4)
UK unemployment[2]	6.6	6.5	4.4	8.0
UK HPI[3]	0.6	2.0	-	(1.5)
UK bank rate	0.2	0.1	0.1	0.1
US GDP[1]	(4.2)	4.4	(0.3)	(30.4)
US unemployment[4]	9.3	7.6	5.5	13.4
US HPI[5]	1.1	1.8	(0.8)	(1.9)
US federal funds rate	0.5	0.3	0.3	0.3
As at 31.03.20				
UK GDP[1]	(8.0)	6.3	1.3	(51.5)
UK unemployment[2]	6.7	4.5	3.7	8.0
UK HPI[3]	(3.5)	2.6	2.7	(6.5)
UK bank rate	0.1	0.3	0.3	0.1
US GDP[1]	(6.4)	4.4	3.2	(45.0)
US unemployment[4]	12.9	7.5	3.8	17.0
US HPI[5]	-	0.7	0.8	(0.3)
US federal funds rate	0.3	0.3	0.3	0.3

1 *Average Real GDP seasonally adjusted change in year (31.03.20 based on Barclays Global Economic Forecasts); expected worst point is the minimum seasonally adjusted quarterly annualised rate.*
2 *Average UK unemployment rate 16-year+.*
3 *Change in average yearly UK HPI = Halifax All Houses, All Buyers index, relative to prior year end; worst point is based on cumulative drawdown in year relative to prior year end.*
4 *Average US civilian unemployment rate 16-year+.*
5 *Change in average yearly US HPI = FHFA house price index, relative to prior year end; worst point is based on cumulative drawdown in year relative to prior year end. (31.03.20 based on QoQ average growth rates).*

Scenario probability weighting

	Upside 2 %	Upside 1 %	Baseline %	Downside 1 %	Downside 2 %
As at 30.06.20					
Scenario probability weighting	20.3	22.4	25.4	17.5	14.4
As at 31.03.20					
Scenario probability weighting	5.0	20.8	46.7	21.0	6.5
As at 31.12.19					
Scenario probability weighting	10.1	23.1	40.8	22.7	3.3

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 4/13

Macroeconomic variables (specific bases)[1]

	Upside 2	Upside 1	Baseline	Downside 1	Downside 2
As at 30.06.20	%	%	%	%	%
UK GDP[2]	32.7	26.4	5.4	1.6	1.2
UK unemployment[3]	3.5	3.6	4.9	9.6	10.9
UK HPI[4]	45.3	27.2	2.3	(15.0)	(33.4)
UK bank rate[3]	0.1	0.1	0.2	0.3	0.2
US GDP[2]	19.1	13.5	3.3	2.0	(3.1)
US unemployment[3]	4.1	4.4	6.3	15.4	18.7
US HPI[4]	32.3	20.9	2.3	(8.8)	(19.7)
US federal funds rate[3]	0.3	0.3	0.3	0.4	0.4
As at 31.12.19					
UK GDP[2]	4.2	2.9	1.6	0.2	(4.7)
UK unemployment[3]	3.4	3.8	4.2	5.7	8.7
UK HPI[4]	46.0	32.0	3.1	(8.2)	(32.4)
UK bank rate[3]	0.5	0.5	0.7	2.8	4.0
US GDP[2]	4.2	3.3	1.9	0.4	(3.4)
US unemployment[3]	3.0	3.5	3.9	5.3	8.5
US HPI[4]	37.1	23.3	3.0	0.5	(19.8)
US federal funds rate[3]	1.5	1.5	1.7	3.0	3.5
As at 30.06.19					
UK GDP[2]	4.5	3.1	1.7	0.3	(4.1)
UK unemployment[3]	3.4	3.9	4.3	5.7	8.8
UK HPI[4]	46.4	32.6	3.2	(0.5)	(32.1)
UK bank rate[3]	0.8	0.8	1.0	2.5	4.0
US GDP[2]	4.8	3.7	2.1	0.4	(3.3)
US unemployment[3]	3.0	3.4	3.7	5.2	8.4
US HPI[4]	36.9	30.2	4.1	-	(17.4)
US federal funds rate[3]	2.3	2.3	2.7	3.0	3.5

Macroeconomic variables (5-year averages)[1]

	Upside 2	Upside 1	Baseline	Downside 1	Downside 2
As at 30.06.20	%	%	%	%	%
UK GDP	8.9	7.2	5.4	5.2	2.8
UK unemployment	4.0	4.3	4.9	6.2	7.2
UK HPI	7.8	5.0	2.3	(1.4)	(5.5)
UK bank rate	0.4	0.3	0.2	0.1	0.1
US GDP	5.9	4.4	3.3	2.7	1.8
US unemployment	4.4	5.1	6.3	8.4	10.9
US HPI	5.8	3.9	2.3	(0.5)	(3.1)
US federal funds rate	0.6	0.5	0.3	0.3	0.3
As at 31.12.19					
UK GDP	3.2	2.4	1.6	0.8	(0.7)
UK unemployment	3.5	3.9	4.2	5.4	7.7
UK HPI	7.9	5.7	3.1	(1.1)	(6.5)
UK bank rate	0.5	0.5	0.7	2.5	3.7
US GDP	3.5	2.8	1.9	1.0	(0.5)
US unemployment	3.1	3.6	3.9	5.0	7.5
US HPI	6.5	4.3	3.0	1.3	(3.7)
US federal funds rate	1.6	1.7	1.7	2.9	3.4
As at 30.06.19					
UK GDP	3.4	2.6	1.7	0.9	(0.6)
UK unemployment	3.7	4.0	4.3	5.1	7.9
UK HPI	7.9	5.8	3.2	0.9	(6.4)
UK bank rate	0.8	0.8	1.0	2.3	3.7
US GDP	3.7	3.0	2.1	1.1	(0.5)
US unemployment	3.1	3.5	3.7	4.7	7.4
US HPI	6.5	5.4	4.1	2.4	(2.6)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

1 *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. Forecast period based on 20 quarters from Q3 2020.*

2 *Upside scenario is the highest annual average growth rate based on seasonally adjusted quarterly annualised rate; 5-year average in Baseline; downside is the lowest annual average growth rate based on seasonally adjusted quarterly annualised rate.*

3 *Lowest yearly average in Upside scenarios; 5-year average in Baseline; highest yearly average in Downside scenarios.*

4 *Cumulative growth (trough to peak) in Upside scenarios; 5-year average in Baseline; cumulative fall (peak-to-trough) in Downside scenarios.*

Source: Barclays PLC, Interim results announcement at 30 2020, p. 33-34

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 5/13

DEFINING OF NEW MACROECONOMIC SCENARIOS

For the preparation of the financial statements, the Group used macroeconomic scenarios in the expected credit losses measurement models that include forward-looking data (see Note 3.8) as well as in the impairment tests of certain assets, including goodwill (see Note 2.2) and deferred tax assets (see Note 6).

These scenarios have been established by Group economists for all Group's entities. A weighting coefficient is assigned for each scenario and the outputs of the models correspond to a probabilised average of these scenarios.

On 31 December 2019, to assess credit losses, the Group used three scenarios which were weighted as follows: 74% for the central scenario, 16% for the stressed scenario, and 10% for the optimistic scenario. On 30 June 2020, the magnitude of the crisis led the Group to build four new macroeconomic scenarios to better reflect the effects and uncertainties generated by the Covid-19 crisis:

- the central scenario (SG Base) predicts, after a sharp decline in GDP in all areas where the Group operates, a very progressive rebound from the second half of 2020, considering in particular that the travel restrictions will be lifted by fall 2020;
- a second scenario (SG Prolonged) predicts, after a sharper decline in GDP, a slower recovery due to a one quarter extension of some lockdown measures and travel restrictions, more prudent consumption behaviours and a tempered political response;
- finally, these two scenarios are supplemented with two extreme scenarios, one optimistic (SG Quick Exit) and one pessimistic scenario (SG Tail Risk).

WEIGHTINGS AS AT 30 JUNE 2020

The Covid-19 crisis represents an unprecedented shock and the risk of downward adjustment of the economic expectations due to the evolution of the pandemic remains significant. The risk of deterioration of the economic situation including a possible systemic crisis remains.

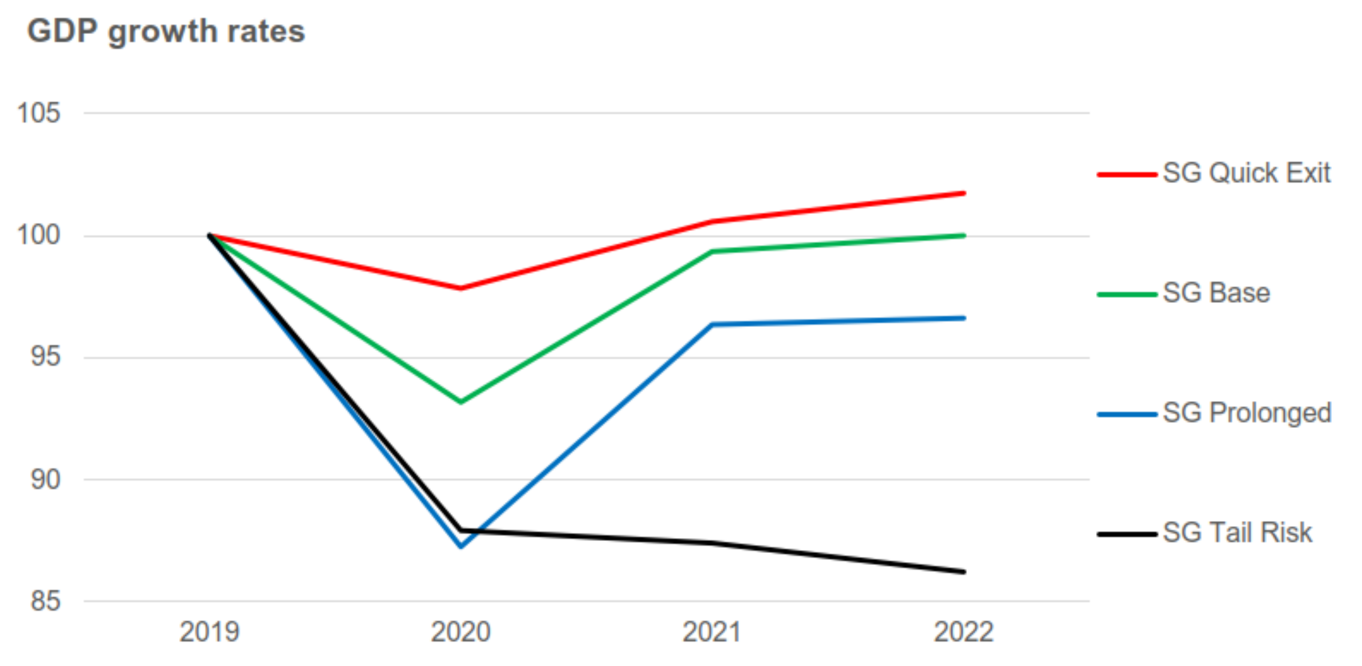
To reflect these uncertainties in the calculation of expected credit losses, the cumulated weight of the two pessimistic scenarios is fixed at 30% (25% for SG Prolonged and 5% for SG Tail Risk), representing almost the double of the weighting usually applied to the stressed scenario (weighted at 16% on 31 December 2019).

The scenario of a quick exit from the pandemic (SG Quick Exit) is considered unlikely with a weighting limited at 5%, this weighting remaining lower than the probability generally used for the optimistic scenario (weighted at 10% on 31 December 2019).

The central scenario has a probability of 65% (versus 74% on 31 December 2019).

In order to perform the budgetary projections used for the impairment tests of goodwill and deferred tax assets, only the SG Base and SG Prolonged scenarios have been retained with respective weightings of 70% and 30%.

The illustration below compares the GDP forecasts in the Euro area selected by the Group for each scenario:



The main variables used for each scenario for the countries in which the Group operates are detailed below (in percentages):

SG Quick Exit scenario	2020	2021	2022	2023
France GDP	(1.5)	2.8	1.5	1.8
Profit margin of French companies	30.9	31.9	32.1	32.1
Euro area GDP	(2.2)	2.8	1.2	1.6
US GDP	(2.6)	2.6	1.7	1.9
China GDP	4.0	9.0	7.0	6.0
Czech Republic GDP	(1.9)	3.0	2.0	2.5
Romania GDP	(2.5)	2.5	1.7	2.5

SG Base scenario	2020	2021	2022	2023
France GDP	(5.8)	6.0	0.7	1.1
Profit margin of French companies	31.2	30.9	30.9	31.5
Euro area GDP	(6.8)	6.6	0.7	1.2
US GDP	(6.6)	6.1	0.9	1.7
China GDP	2.9	7.3	4.8	4.6
Czech Republic GDP	(6.0)	5.8	0.8	2.0
Romania GDP	(6.5)	6.3	0.6	2.0

SG Prolonged scenario	2020	2021	2022	2023
France GDP	(11.1)	9.6	0.4	0.6
Profit margin of French companies	28.4	29.3	30.5	30.9
Euro area GDP	(12.8)	10.5	0.3	0.6
US GDP	(11.5)	10.0	0.5	1.5
China GDP	(3.0)	3.0	3.0	4.0
Czech Republic GDP	(11.3)	9.8	0.1	1.5
Romania GDP	(12.5)	10.0	0.0	1.5

SG Tail Risk scenario	2020	2021	2022	2023
France GDP	(10.6)	(0.1)	(0.8)	0.2
Profit margin of French companies	28.5	29.3	29.9	31.2
Euro area GDP	(12.1)	(0.6)	(1.3)	0.5
US GDP	(12.5)	(1.1)	(0.3)	1.0
China GDP	(4.3)	(3.3)	3.9	4.5
Czech Republic GDP	(10.5)	(0.9)	(2.0)	0.9
Romania GDP	(12.5)	(1.0)	(1.7)	1.1

Source: Société Générale, Consolidated Financial Statements – 30.06.2020, p. 13-15

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 6/13

MAZARS INSIGHTS:

- **BNP Paribas** provides an expected date of GDP recovery detailed by main Region

Forward Looking Information

The Group considers forward-looking information both when assessing significant increase in credit risk and when measuring Expected Credit Losses (ECL).

Regarding the assessment of significant increase in credit risk, beyond the rules based on the comparison of risk parameters between initial recognition and reporting date (cf. "significant increase in credit risk" section), the determination of significant increase in credit risk is supplemented by the consideration of more systemic forward looking factors (such as macro-economic, sectorial or geographical risk drivers) that could increase the credit risk of some exposures. These factors can lead to tighten the transfer criteria into stage 2, resulting in an increase of ECL amounts for exposures deemed vulnerable to these forward looking drivers.

Regarding the measurement of expected credit losses, the Group has made the choice to use 3 macroeconomic scenarios by geographic area covering a wide range of potential future economic conditions:

- a baseline scenario, consistent with the scenario used for budgeting,
- an adverse scenario, corresponding to the scenario used quarterly in Group stress tests,
- a favourable scenario, allowing to capture situations where the economy performs better than anticipated.

The link between the macro-economic scenarios and the ECL measurement is mainly achieved through a modelling of the probabilities of default and deformation of migration matrices based on internal rating (or risk parameter). The probabilities of default determined according to these scenarios are used to measure expected credit losses in each of these situations.

The weighting of the expected credit losses under each scenario is performed as follows:

- 50 % for the baseline scenario,
- the weighting of the two alternative scenarios is computed using a relationship with the position in the credit cycle. In this approach, the adverse scenario receives a higher weight when the economy is in strong expansion than in lower growth period in anticipation of a potential downturn of the economy.

In addition, when appropriate, the ECL measurement can take into account scenarios of sale of the assets.

Macroeconomic scenarios:

The three macroeconomic scenarios are defined with a 3-year horizon. They correspond to:

- a baseline scenario which describes the most likely path of the economy over the projection horizon. This scenario is updated on a quarterly basis. It is designed by Group Economic Research in collaboration with various experts within the Group. Projections are provided for key markets of the Group, through main macro-economic variables (GDP and its components, unemployment rate, consumer prices, interest rates, foreign exchange rates, oil prices, real estate price etc.) which are drivers for risk parameter models used downstream in the credit stress testing process;
- an adverse scenario which describes the impact of the materialisation of some of the risks weighing on the baseline scenario, resulting in a much less favourable economic path. The starting point is a shock on GDP. This shock on GDP is applied with variable magnitudes, but simultaneously among economies when the crisis considered is a global contemporaneous crisis. These assumptions are broadly consistent with those proposed by the regulators. Other variables (unemployment, inflation, interest rate) are deducted on the basis of econometric relationships and expert judgment.
- a favourable scenario which reflects the impact of the materialisation of some of the upside risks for the economy, resulting in a much more favourable economic path. To achieve an unbiased estimation of provisions, the favourable scenario is designed in such a way that the probability of the shock on GDP growth (on average over the cycle) is equal to the probability of the corresponding shock in the adverse scenario. The magnitude of favourable GDP shocks generally corresponds to 80 %-95 % of the magnitude of adverse GDP shocks. Other variables (unemployment, inflation, interest rate) are deducted in the same way as in the adverse scenario.

After the strong shock in the first half of 2020 (precisely in the first quarter in China and in the second one in Europe and the United States), the baseline scenario foresees a rebound in the second half of this year. This recovery should continue in 2021, at a gradually moderating pace, leading to annual growth rates well above the historical standards in all the countries considered. While marking a further deceleration in its recovery in 2022, activity should return to its pre-crisis level (that of the fourth quarter of 2019) during the second half of 2022 in the vast majority of countries. Thus, the shock's geometry is a V-shape.

The risk of a prolongation of the crisis for sanitary or economic reasons is addressed in the adverse scenario, detailed below.

The level retained for each country, both in terms of initial shock and recovery profile is based on (i) the number of coronavirus cases and the severity of the containment measures implemented, (ii) the weight in the economy of the most exposed sectors (for example transport, tourism, leisure, hotel and catering), (iii) and the magnitude of both activity and income support mechanisms and economic recovery plans of the economy implemented by the authorities.

Shocks implemented in Italy and France are more severe than in the whole eurozone.

	Return to the 4th quarter 2019 level of GDP
France	4th quarter 2022
Italy	Beyond 2023
Belgium	3rd quarter 2022
Germany	3rd quarter 2021
Euro area	2nd quarter 2022
United States	4th quarter 2022

Source: BNP Paribas, Consolidated financial statements – first half 2020, p. 51-52

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 7/13

These assumptions for the eurozone are close to ECB's scenario which foresees: (i) a -8.7 % fall in average annual GDP in 2020; (ii) a -16.3 % fall in GDP between the fourth quarter 2019 and the second of 2020; (iii) a return of GDP to its pre-crisis level by end-2022.

The adverse scenario assumes the materialisation of some risks for the economy, resulting in a much less favourable economic path than in the baseline scenario.

In the current context, the dominant risk is that the sanitary crisis does not vanish as rapidly as expected in the baseline scenario (due to less favourable sanitary developments than assumed) or that its economic consequences exceed those currently anticipated (i.e. more severe impacts or lasting effects), in the end triggering adverse developments beyond those directly due to containment, in particular :

- Extended crisis, due to weaker demand: the sanitary crisis could trigger a more "classic" and therefore longer crisis, if it provokes significant damages in the economy (e.g. higher unemployment rate, higher number of bankruptcies, etc.) which affect domestic demand.
- Tensions related to public finances: given the extent of the contraction in activity that is expected and the amount of fiscal support that will be provided by governments to compensate this major shock on activity, debt-to-GDP ratios are bound to increase markedly in some countries and reach unprecedented levels. This deterioration in public finance metrics could give birth to tensions in financial markets and austerity measures.
- Pressure on financial institutions rentability: the sanitary crisis increases difficulties to repay debt for a number of borrowers, creates volatility in financial markets and induces downward pressures on interest rates. All these developments are susceptible to weigh on banking sector profitability.
- Further market corrections: the sanitary crisis has already had a major impact on some valuations in financial markets. Depending on sanitary developments, additional corrections could affect some markets.
- A further deterioration of activity in China: given the weight of the Chinese economy, any further deterioration in activity would impact global financial markets, global trade and commodity prices.
- Emerging markets' difficulties: some emerging markets suffering from economic imbalances and domestic political difficulties, of the US dollar strength and the deteriorating international relationships could be impacted more markedly by the sanitary crisis.

Other risks, not directly linked to the sanitary crisis are also embedded in the adverse scenario:

- Risks on trade flows: despite the United States and China signed a "phase one trade deal" in early 2020, tensions cold resurface between these two countries, since disagreements remain regarding intellectual property protection, technology transfers or industrial policies. In parallel, commercial tensions between the United States and the European Union are still at risk of building, given disagreements about aircraft and auto sector subsidies, digital services taxes, the WTO, or the auto sector.
- Brexit-related risks: in the absence of a comprehensive deal with the European Union until end-2020, the United Kingdom could face a combination of disruptions in some sectors, greater uncertainty detrimental to investment and consumption, weaker trade dynamics, financial strains, as well as negative real estate developments in early 2021.
- Geopolitical risks: middle East tensions have the potential to weigh on the global economy through shocks on commodity prices and business confidence.

It is assumed that these latent risks materialise from the fourth quarter 2020, triggered by an extension of the health crisis.

The effect of the adverse scenario on GDP growth in OECD countries is reflected in the gap vis-à-vis the baseline scenario a the end of the shock period (3 years) reaching between -5.8 % and -12 % according to the country and, in particular, -7.1 % on average in the euro zone and -5.8 % in United States.

At 30 June 2020, the weighting of the adverse scenario is 19 % for the Group (31 % for the favourable scenario), versus 26 % at 31 December 2019 (24 % for the favourable scenario), reflecting a position below the average of the credit cycle at 30 June 2020 in the context of the current health crisis and the associated containment measures.

The Group's ECL is slightly higher than the one determined based on the baseline scenario. Applying an equal weighting to favourable and adverse scenario (25%) would lead to a EUR 100 million increase, representing 2%, in expected losses.

Adaptation of the ECL assessment process to take into account of the specific features of the sanitary crisis:

The measurement of the impact of macroeconomic scenarios on expected credit losses has been adjusted to reflect the specificities of the current health crisis. Given the exceptional nature of the shock in the first semester 2020 linked to the temporary containment measures and strong support provided by governments and central banks, macroeconomic parameters for each country or geographic area included in the pre-existing models (calibrated on past crises) have been adapted in order to extract the information on the medium-term impacts on macroeconomic environment and thus minimize excessive short-term volatility.

In the euro area, the medium-term perspective adopted for the baseline scenario corrects the destruction of value over the period, for an amount of similar magnitude to the support programs announced by governments and the European Central Bank.

For the new loans secured by a state guarantee (mostly concentrated on French Retail Banking), the computation of expected credit losses has been adjusted accordingly.
In addition, for the sectors that are the most impacted by the crisis (aviation, leisure, non-food retail, tourism) the criteria used to identify a significant increase in credit risk are tightened in order to anticipate a migration to stage 2 for the loans in these sectors.
For the specific business of consumer finance, projections of migration to default have been adapted in order to reflect, by country, the specificities of this client segment. The loans benefiting from moratorium measure were analysed in specific risk classes.
Besides, the absence of a general maturity extension scheme for individuals, notably in France, led to classify the loans that benefited from accompanying measures not initially provided for under the contract as forborne. However, these measures were not considered as an automatic criterion for transfer to stage 2.

Source: BNP Paribas, Consolidated financial statements – first half 2020, p. 52-54

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 8/13

MAZARS INSIGHTS:

- **Credit Agricole** has opted for a more narrative / descriptive presentation of its macro-economic scenarios

NOTE 2 Major structural transactions and material events during the period

2.1 The COVID-19 health crisis

2.1.4 Credit risk assessment

In the context of the COVID-19 health crisis, the Group has revised its forward-looking macroeconomic forecasts for determining credit risk estimates.

Information on the selected macroeconomic scenarios

The Group used three main scenarios for the calculation of IFRS 9 provisioning parameters with projections to 2022.

These three scenarios incorporate differentiated assumptions with regard to the impacts of the COVID-19 crisis on the economy based on how rapid and complete the return to normal is of mobility, activity and consumption, which depend largely on health developments, which are still currently very uncertain. The levels of confidence for different customer types are also key: depending on health, economic and employment expectations, it results in varying degrees of wait-and-see and precautionary behaviour, which consequently determines the propensity of households to consume the abundant savings accumulated during lockdown and the capacity of corporates to make investments. The size, effectiveness and timing of government stimulus support measures also have a significant impact on the evolution of activity.

The first scenario describes a gradual but unsynchronised exit from the crisis, since the return to full mobility occurs at different rates from country to country. It assumes that there will not be a second wave of the epidemic.

After a strict lockdown phase in France and the eurozone (March-May), restrictions were gradually eased (May-June) and there was an upturn in activity in most sectors. Constraints linked to compliance with health rules and restrictive measures remain in certain sectors. Restrictions on activity and mobility produced a double shock, on both supply and demand, which led to a sharp fall in activity during the lockdown period. The lifting of constraints at the end of the second and start of the third quarter of 2020 will almost automatically trigger a very strong rebound during the summer.

Thanks to greatly improved health conditions and the threat of a resurgence of the virus having been averted, the restored confidence of households means a making up for lost time in the consumption of goods made possible by the use of surplus "forced" savings that built up during the lockdown period. The deterioration in production capacity remains very limited thanks to the support measures, which are preserving employment and household income. The end of uncertainty and better visibility for their markets is also enabling corporates to resume their investments more quickly. This translates into a very marked recession in 2020 on average year-on-year (-7% in France) and growth that remains solid in 2021 and 2022 (+7.3% and +1.8% respectively), with most of the catching-up of activity nevertheless taking place in 2020. As a result, real GDP in 2022 will be 1.6% higher than in 2019.

Thanks to the support measures, which were designed to contain the recessionary effects and the financial difficulties of customer types, the impact on unemployment in France will remain limited.

In this context, inflation remains very low, averaging only 1% in 2022 in France (0.3% in 2020 and 0.6% in 2021).

Accordingly, the ECB will maintain a consistently accommodative policy stance to maintain favourable financial and liquidity conditions and avoid fragmentation of the eurozone. As a result, interest rates remain very low over the long term. This, combined with the strong signal provided by the launch of the European recovery fund financed by joint issuances, will help to contain European sovereign spreads with the German Bund. The 10-year French Treasury bond (OAT) will remain about 50 basis points above the Bund.

The second scenario involves a drop in activity, which will turn out to be more negative in the second quarter, and a slower recovery of the economy by the end of 2020.

After that, a gradual recovery, which will still be solid at the beginning of 2021, then gradually moderate, will allow a return to 2019 activity levels by the end of 2022.
In France, the very mixed profile of the trends in activity in 2020 will lead to a gradual recovery of production in the third and fourth quarters of 2020. There is a slightly sharper decline in GDP than in scenario 1 (-7.2% in the case of France) followed by a marked recovery in 2021 and 2022 (GDP growth of +5.9% and +1.5% respectively).

The third scenario is characterised by a slightly stronger downturn in activity in the second quarter and a very sluggish exit from the crisis.

The resurgence of the epidemic would result in another widespread lockdown, currently considered unlikely, of two months in the autumn and the lifting of restrictions will gradually take place by the end of 2020. In total, the periods outside of lockdown will not be long enough to allow a return to normal. Activity will only recover partially when periods outside of lockdown are too brief. Households will adopt precautionary behaviours and keep their savings to the detriment of consumption and, due to a lack of visibility on their markets, corporates will delay their investments. In France, GDP will contract by around -15% on average year-on-year in 2020. Gradual recovery will be postponed until 2021, but the trending level of activity will be negatively affected by a higher rise in unemployment and the destruction of production capacity, despite support measures, which weigh very heavily on public finances. French GDP will nevertheless show high growth rates in 2021 and 2022 (+6.6% and +8% respectively), due to positive base effects in late 2020 and early 2021. In 2022, activity will remain more than 2% below its 2019 level.

Support measures: Note that the risk parameter projection process has been revised to better reflect the impact of government measures in the projections. The consequence of this revision is the mitigation of the suddenness of the intensity of the crisis and its occurrence over a longer period (3 years).

The variables relating to interest rate levels and, more generally, all variables related to capital markets have not been modified because their forecasts already structurally incorporate the effects of the support policies.

Source: Crédit Agricole, Condensed interim consolidated financial statements as at 30 June 2020, p. 19-20

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 9/13

IFRS 9 impairment approach

Forward-looking information

Under IFRS 9, the allowance for credit losses is based on reasonable and supportable forward looking information obtainable without undue cost or effort, which takes into consideration past events, current conditions and forecasts of future economic conditions.

To incorporate forward-looking information into Deutsche Bank's allowance for credit losses, the Group uses two key elements:

- As its base scenario, the Group uses external survey-based macro forecasts (consensus view on GDP and unemployment rates) supplemented by market-implied projections of interest and FX rates. In addition, our scenario expansion model, which has been initially developed for stress testing, is used for forecasting macroeconomic variables that are not covered by external consensus or market sources.
- Statistical techniques are then applied to transform the base scenario into a multiple scenario analysis. The scenarios specify deviations from the baseline forecasts and are used for deriving multi-year PD curves for different rating and counterparty classes, which are applied in the calculation of expected credit losses and in the identification of significant deterioration in credit quality of financial assets as described previously.

The general use of forward-looking information, including macro-economic factors, as well as adjustments taking into account extraordinary factors, are monitored by the Group's Risk and Finance Credit Loss Provision Forum. In certain situations, Credit Risk officers and senior management may have additional information in relation to specific portfolios to indicate that the statistical distribution used in the ECL calculation is not appropriate. In such situations, the Group would apply a judgmental overlay.

IFRS 9 – Forward Looking Information applied for the second quarter 2020

	Year 1 (4 quarter avg)	Year 2 (4 quarter avg)	Year 3 (4 quarter avg)
Credit - ITX Europe 125	74.90	–	–
FX - EUR/USD	1.12	–	–
GDP - Eurozone	(7.80) %	6.54 %	1.80 %
GDP - Germany	(6.58) %	5.91 %	1.87 %
GDP - Italy	(9.57) %	7.34 %	1.60 %
GDP - USA	(5.02) %	6.03 %	2.65 %
Rate - US Treasury 2y	0.18 %	–	–
Unemployment - Eurozone	10.05 %	9.11 %	8.63 %
Unemployment - Germany	4.22 %	4.00 %	3.94 %
Unemployment - Italy	12.08 %	11.32 %	10.45 %
Unemployment - Spain	19.62 %	16.35 %	14.47 %
Unemployment - USA	10.55 %	7.19 %	6.18 %

The economic data used in the forward-looking information for the calculation of the allowance for credit losses while derived from the same sources are not directly comparable with other economic data presented in this report due to the methodology used, the composition of the input factors and the periods under consideration

As explained in Chapter "Measures in context of COVID-19 pandemic" in the interim management report, the Bank has decided to perform an overlay to address substantial uncertainty about the impact of the COVID-19 pandemic on the economy to overcome the weakness of the Forward Looking Information (FLI) model in the current economic environment and to reflect regulatory guidance and financial support to the industry.

The overlay calculation uses a 3 year average of the GDP and unemployment forecasts as presented in the table above for the base scenario (versus a four quarter averaging of the first and second year under normal circumstances), which is used for calculating point-in-time (PIT) rating migration matrices. In line with the Group's standard methodology, market rate forecasts are also used in the calibration of the PIT matrix for the next four quarters. A through-the-cycle matrix specifies rating migrations from 2022 onwards.

Source: Deutsche Bank, Interim Report as of June 30 2020, p. 81-82

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 10/13

Calculation of expected credit loss

Commerzbank calculates the ECL as the probability-weighted, unbiased and discounted expected value of future loan losses over the total residual maturity of the respective financial instrument, i.e. the maximum contractual term (including any renewal options) during which Commerzbank is exposed to credit risk. The 12-month ECL used for the recognition of impairments in stage 1 is the portion of the LECL that results from default events which are expected to occur within 12 months following the end of the reporting period.

The ECL for stage 1 and stage 2 as well as for insignificant financial instruments in stage 3 is determined on an individual transaction basis taking into account statistical risk parameters. These parameters have been derived from the Basel IRB approach and modified to meet the requirements of IFRS 9. The significant main parameters used in this determination include the:

- customer-specific probability of default (PD);
- loss given default (LGD); and the
- exposure at default (EaD).

All risk parameters used from the Bank's internal models have been adjusted to meet the specific requirements of IFRS 9, and the forecast horizon has been extended accordingly to cover the entire term of the financial instruments. For example, the forecast for the development of the exposure over the entire term of the financial instrument therefore also includes, in particular, contractual and statutory termination rights.

In the case of loan products that consist of a utilised loan amount and an open credit line and for which in customary commercial practice the credit risk is not limited to the contractual notice period (in Commerzbank this relates primarily to revolving products without a contractually agreed repayment structure, such as overdrafts and credit card facilities), the LECL must be determined using a behavioural maturity, which typically exceeds the maximum contractual period. In order to ensure that the LECL for these products is determined in an empirically sound manner in compliance with IFRS 9 requirements, Commerzbank calculates the LECL directly for these products based on realised historical losses.

As a rule, the Group estimates the risk parameters specific to IFRS 9 based not only on historical default information but also, in particular, on the current economic environment (point-in-time perspective) and forward-looking information. This assessment primarily involves reviewing the effects which the Bank's macroeconomic forecasts will have regarding the amount of the ECL, and including these effects in the determination of the ECL.

A baseline scenario is used for this purpose which relies on the respective applicable consensus (forecasts of different banks on significant macroeconomic factors, such as GDP growth and the unemployment rate). This baseline scenario is then supplemented with additional macroeconomic parameters that are relevant for the model. In the current reporting period, the baseline scenario was prepared taking into account the ECB forecast of 4 June 2020. For mBank, the adjustment to a scenario specific to Poland was done locally. The transformation of the macroeconomic baseline scenario into effects on the risk parameters is based on statistically derived models. Giving consideration to the current situation, we have ensured that the relevant experts are sufficiently involved within the framework of the existing policies. Potential effects from non-linear correlations between different macroeconomic scenarios and the ECL are corrected using a separately determined adjustment factor. The appropriateness of this adjustment factor as at the reporting date was checked and verified.

When calculating the expected credit loss, additional effects may also have to be taken into account resulting from scenarios or events that are not reflected in the IFRS 9 ECL parameter set presented as part of the modelling (these may relate to singular events such as substantial political decisions or military conflicts); for these additional effects, a separately determined adjustment to the result from the IFRS 9 ECL model is made. The examination as to whether such top level adjustments with the involvement of senior management are necessary, as well as their possible implementation, are regulated in a policy.

Such an adjustment to the results of the IFRS 9 ECL model was deemed necessary in the first quarter of 2020 due to the coronavirus pandemic. As that time, the parameters used in the standard model reflected neither the economic effects of the global lockdowns nor the massive support and assistance measures taken by governments and institutions. This top-level adjustment was reviewed in the second quarter of 2020 in terms of its necessity and adequacy. The review took into account the extent to which the effects of the crisis were already sufficiently reflected in the parameters used in the ECL calculation, especially for the assumptions regarding the macroeconomic environment. The baseline scenario used in the second quarter of 2020 for the ECL calculation giving consideration to the ECB publication already reflects the anticipated effects of the coronavirus pandemic. It includes the following material assumptions:

Baseline scenario	2020
GDP growth	
Germany	–7.1%
Euro zone	–8.7%
Poland	–4.2%
Rate of unemployment	
Germany	6.1%
Euro zone	9.8%
Poland	7.0%

The need for a TLA due to changed macroeconomic conditions no longer exists in the second quarter of 2020 under the new baseline scenario. Consequently, the TLA was reduced in the second quarter of 2020 by the partial amount set aside in the first quarter resulting from revised macro assumptions. This also applies to mBank, which calculates IFRS 9 risk provisions locally in line with Group requirements using its own infrastructure and specific macroeconomic assumptions. In the first quarter of 2020, a TLA was also applied there due to changed macroeconomic conditions. As the corresponding assumptions were already incorporated into the ECL model in the second quarter of 2020, there was no further need for this.

In addition, the result of the IFRS 9 ECL model was raised in the first quarter of 2020 because an increase in the probability of default was expected for parts of the portfolio during the pandemic. This was still considered necessary in the second quarter of 2020. The assumptions made for the derivation were reviewed and partially adjusted. Compared with the first quarter of 2020, the sectors or sub-portfolios assumed to be affected have been expanded and the estimated effects have been better differentiated. As a result, an increase in the probability of default during the pandemic was assumed for a larger proportion of the portfolio, albeit to a different extent in some cases than in the first quarter. The new assessments were made on the basis of the portfolio development already observed in the course of the crisis, including various individual case analyses. It emerged that the government programmes are generally having a good effect and that our customers are making use of the support and assistance measures offered and have benefited from them so far. However, the development we see going forward is heterogeneous at the sub-portfolio level. For example, we anticipate that among consumers with a weak credit rating, of whom the majority have made use of statutory deferrals, defaults will increase once the measures expire. Furthermore, for the small-business customers sub-portfolio, an increased probability of default was assumed in the second quarter for the TLA calculation even for customers in the rating range of > 4.0 (first quarter: > 4.8). Excluded from this were customers who had already received government aid loans since the beginning of the crisis, as in these cases it was assumed that the business model was fundamentally sustainable beyond the crisis. The effects for the banking portfolio in emerging markets were estimated to be more negative than in the first quarter. For German and international corporate customers, the TLA requirement also increased compared to the first quarter of 2020, as an increase in the probability of default over the course of the pandemic was assumed for larger portions of the portfolio. For the customers potentially most affected, the anticipated effects of the crisis, taking government aid into account, have already been largely factored in on a borrower-specific basis by the rating systems used and the strong focus of the credit risk and credit control function; this has been taken into account for the portfolio-based estimation of the probability of default in the TLA calculation.

Key assumptions in our estimate across all sectors and subportfolios were that further global lockdowns on the scale of those seen in March/April can be avoided and that effective local containment strategies can be found if infection rates should go up.

In the second quarter of 2020, the point-in-time parameters under IFRS 9 were also reviewed and adjusted as necessary in response to the coronavirus crisis. This also required that the results of the ECL model be increased by means of a top-level adjustment.

The effects of the adjustments on the stage allocation were taken into account in the calculation of the TLA.

For more information on ECL and TLA, see the Risk Report (page 19 ff.).

Overall, the valuation allowances for risks arising from financial assets and the provisions for off-balance sheet items changed as follows:

Source: Commerzbank, Interim report as at 30 June 2020, p.70-71

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 11/13

Part E - Information on risks and hedging policies

2.3 Measurement methods for expected losses

The expected credit loss deriving from the parameters previously described considers macroeconomic forecasts through the application of multiple scenarios to the forward looking components in order to compensate the partial non-linearity that is naturally embedded in the correlation between the macroeconomic changes and the expected credit loss. Specifically, the non-linearity effect is incorporated by estimating a correction factor applied directly to the expected credit loss ("ECL") of the portfolio.

The process defined to include multiple macroeconomic scenarios is fully consistent with forecast processes used by UniCredit group for additional risk management purposes (for example processes adopted to calculate expected credit losses from macroeconomic forecasts based on EBA stress test and ICAAP Framework) and also takes advantage of independent UniCredit Research function.
Specifically, the Group has selected three macroeconomic scenarios to determine the forward-looking component: a baseline scenario, one positive scenario and one adverse scenario.
The baseline scenario is the reference central scenario and therefore is considered to be the most probable realization. Positive and adverse scenarios represent possible alternative realizations, respectively a better and a worst one compared to the baseline in terms of evolution of the economies of the countries in which the Group operates:

- the Baseline scenario reflects the macroeconomic evolution expected for the Group. The macroeconomic scenario foresees a significant deterioration of the global economy due to the lockdown measures deemed necessary to contain Covid-19. The Eurozone GDP and most CEE countries is expected to fall sharply in 2020 before recovering partially in 2021, in a context where short and long-term interest rates are at historically very low levels in recent years. In details, annual real GDP growth for the Eurozone is expected to be -13.0% in 2020, +10.0% in 2021 and +1.5% in 2022 (with Italy at -15.0%, +9.0% and +0.8% and Germany at -10.0%, +10.0% and +1.8% respectively); The scenario assumes that the 3-month Euribor will remain stable at -0.40 in 2020 and 2021, just below the negative levels of 2019 (-0.38);
- the Positive scenario is based on the hypothesis that the economic growth of 2020 will slow down at lower level than in the Baseline scenario both at a global and European level, sustained by accommodating monetary and fiscal policies. In this scenario, Eurozone's growth would decrease in 2020, with the lowest level found in Italy, France and Spain, before recovering in the next two years, that would translate in a faster average annual real GDP recovery (compared to the Baseline scenario) by 0.8% in the 2020-2022 three-year horizon. More in detail, the annual growth of real GDP for the Eurozone would slow down to -7.5% in 2020, increasing to +7.0% in 2021 and to +1.5% in 2022 (with Italy at -9.0% in 2020, +7.0% in 2021 and +0.8% in 2022) in a context of short-term rates (3 months Euribor) still expected in negative territory in the three years 2020-2022, on the back of a monetary policy remaining accommodative for the whole horizon throughout the three-year period. The occurrence of such scenario, at the moment of its definition, is expected to be plausible and appropriate to quantify a potential better trend of the economy than the one assumed in the Baseline scenario;
- the Adverse scenario reflects a hypothesis of re-intensification of the contagion in 2021 and a re-activation, even if partial, of the measures necessary to contain Covid-19. More in detail, the real GDP in the Eurozone would decrease in 2020 reaching -13.0% before starting to grow again in 2021 by +4.0%, less than in the Baseline scenario, and in 2022 by 1.5% (with Italy at -15.0% in 2020, +1.0% in 2021 and +0.8% in 2022) in a context of short-term rates that stay negative for the whole three-year horizon. The occurrence of such scenario, at the time of its definition, is considered plausible and appropriate to quantify a potential adverse trend of the economy. A minor rebound of the economy in 2021 could be driven both by a decreasing economic slowdown in 2020 and by other economic factors related directly or indirectly to the pandemic; for this reason, it is assumed that the Adverse scenario is more likely than the Positive scenario.

In this context, it is worth noting that in light of the deterioration of the global economy arising from Covid-19 pandemic and related lockdown measures, the Macro-economic scenario mentioned above were updated with reference to the 31 March 2020 for the preparation of Financial reports as at 31 March 2020.
In particular these updates were performed on the basis of the forecasts produced by UniCredit Economics Research, issued through the Chartbook officially published on 2 April 2020.
As at 30 June 2020 the base line macroeconomic scenario developed for March was confirmed considering that subsequent updates were not deemed to be significant and that estimates, at this stage of the pandemic, are still subject to a high degree of volatility.
Furthermore, in the first half of 2020, the Loan Loss provisions referred to UniCredit S.p.A.[26], resulting from the application baseline scenario were re-allocated. This reallocation has been performed, on the basis of a deep dive analysis aimed to identify the economic sectors to which UniCredit S.p.A. is exposed and the related impact deriving from the lock-down following the Covid-19 outbreak.
For this purpose, UniCredit S.p.A. portfolio has been clustered into different sectors with different degree of risk to reflect the sensitivity to Covid-19 and simulate the forward looking evolution of the clients' increase in credit risk.
As a result of such analysis, the economic sector of the counterparty represented an additional input relevant to determine the Expected Probability of Default, and consequently the Expected Credit Losses, in order to include, when calculating LLPs, the quantitative effect connected to a potential future default event deriving from the GDP deterioration.

In order to estimate the sensitivity of Expected Credit Loss to changes in macroeconomic scenario, the increase in LLP due to the scenario update performed in March 2020 is divided by the change in GDP forecasts between March 2020 and December 2019. The following assumptions are made:

- GDP is assumed to be the most relevant variable as indicator of the severity of the scenario;
- given that most of the shock is concentrated in the 2020, the GDP change is considered for 2020;
- the main Legal Entities of the Group are considered, assigning to each of them a GDP change based on each respective country.

The result is that in case of a decrease of 1 GDP percentage point for the main geographies of the Group, the impact would be an increase in a range of 1 to 2 basis points of Group Cost of Risk, of which around half is related to UniCredit S.p.A.

Source: UniCredit, Consolidated Financial Statements – 30.06.2020, p. 161-163

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3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 12/13

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 IFRS9. Even if 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 IFRS9 as well as on solvency, urging:

- the entities to mitigate the potential procyclicality of the accounting regulation,
- 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 coordinately issued recommendations or measures within the COVID-19 crisis framework regarding the estimation of the expected losses under IFRS9.

The common denominator of all of these recommendations is that, given the difficulty to elaborate 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 the automatic application of the models in order to balance them and increase the weight of the long-term macroeconomic forecasts in the calculation of the expected losses is needed. As a result, the expected results 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 uncertainty. As a consequence, different scenarios have been taken into consideration in the calculation of expected losses, registering 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 June 30, 2020:

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

	Spain			Mexico			The United States		
Date	GDP	Unemployment	HPI	GDP	Unemployment	HPI	GDP	Unemployment	HPI
2020	(11.54%)	20.49%	(4.08%)	(9.97%)	4.59%	2.02%	(4.40%)	7.82%	(0.33%)
2021	7.53%	17.33%	(5.24%)	4.08%	4.45%	(1.53%)	3.58%	5.02%	(0.39%)
2022	2.94%	15.68%	6.28%	4.18%	4.03%	0.09%	2.36%	4.24%	1.86%
2023	2.09%	14.42%	5.01%	1.49%	4.06%	(0.02%)	2.08%	4.09%	2.59%
2024	2.07%	13.25%	3.65%	1.53%	4.05%	0.67%	2.09%	4.10%	2.14%
2025	2.00%	12.11%	3.11%	1.46%	4.02%	0.95%	2.11%	4.10%	1.55%

	Peru		Argentina		Colombia		Turkey	
Date	GDP	Unemployment	GDP	Unemployment	GDP	Unemployment	GDP	Unemployment
2020	(14.97%)	30.07%	(5.94%)	14.23%	(3.07%)	16.95%	0.15%	14.03%
2021	8.86%	13.10%	1.54%	11.53%	3.98%	14.13%	5.04%	13.43%
2022	3.53%	11.48%	2.02%	10.23%	2.64%	11.81%	4.53%	10.78%
2023	3.68%	11.39%	1.96%	9.70%	3.32%	11.63%	4.52%	10.38%
2024	3.63%	11.30%	1.97%	8.75%	3.47%	11.42%	4.51%	10.23%
2025	3.21%	11.20%	1.99%	7.78%	3.70%	11.22%	4.50%	10.03%

Source: Group BBVA, Interim Consolidated Report 2020, p. 23-36

3.2.4 MACRO-ECONOMIC SCENARIOS AND FORWARD-LOOKING INFORMATION USED TO MODEL ECL – 13/13

Note 10 Expected credit loss measurement (continued)

b) Changes to ECL models, scenarios, scenario weights and key inputs

The outlook for the global economy has deteriorated markedly since the end of 2019 as a result of the COVID-19 outbreak. COVID-19 and related lockdown measures have significantly impacted major economies across the world. Uncertainties are still at a high level, making predictions difficult and displaying several potential triggers for further negative developments.

Scenarios and scenario weights

For the second quarter of 2020, the two scenarios and related macroeconomic factors that were applied in the first quarter of 2020 were reviewed in light of the economic and political conditions prevailing at 30 June 2020 through a series of extraordinary governance meetings, with input from UBS risk and finance experts across the regions and business divisions.

The key aspects of the narratives for the scenarios are summarized below.

- The baseline scenario was updated for 30 June 2020 and takes into account a significant deterioration of GDP in relevant markets. GDP in the US and Switzerland is expected to decline by around 6.4% and 5.5%, respectively, in 2020 – this reflects a very significant drop in the first half of 2020 and an expected sequential rebound of about 4% and 8%, respectively, in the second half of the year. The Eurozone also experiences a very severe contraction in economic activity in 2020, with an 8.2% decline in GDP. In addition, the baseline reflects the sharp increase in unemployment observed in the first half of 2020, with unemployment expected to remain at around 14% in the US and to rise to just below 4% in Switzerland by the end of 2020. Housing prices are assumed to be largely flat in Switzerland but to decrease in the US, by around 4% over the two years 2020 and 2021 in cumulative terms. Overall, economic improvements are expected to take place in 2021, with GDP expected to increase by around 4% in both the US and Switzerland.
- The global crisis scenario (also known as the severe downside scenario) was updated during the second quarter of 2020 to account for updated market data and the impact of the COVID-19 outbreak. The scenario assumptions are considered to be consistent with assumptions for COVID-19-related disruption but to a significantly more adverse degree than what is considered under the baseline scenario, with a full-year GDP contraction expected to continue into 2021 and only a moderate recovery starting from the end of 2021. Relative to their values at the end of the first quarter of 2020 and considering the period until the end of the first quarter of 2021, GDP is assumed to decline by more than 11% in both the US and Switzerland and unemployment to remain elevated, with a peak above 17% and 6% in the US and Switzerland, respectively. Housing prices are also assumed to decline significantly, by almost 14% and 20% in the US and Switzerland, respectively.
- Given the evolving pandemic, management assessed in the first quarter of 2020 whether an interim review of the upside (asset price inflation) and mild downside (monetary-tightening) scenarios, both of which were applied at the end of 2019, would be warranted, as these scenarios became less probable in the specific circumstances. This assessment was reviewed during the second quarter of 2020 and, consistent with the first quarter, management agreed that the upside and the mild downside narratives should remain in place, as they may become relevant again once there is more clarity on COVID-19; however, their probability weights should be temporarily set to zero given (i) there are too many uncertainties and lack of supportable information on precedent cases that could be used for modeling narratives and economic shock factors, and (ii) the probability weight estimation would have been speculative. This assessment will be reviewed in the third quarter of 2020.

Key parameters	Baseline 2020	Baseline 2021
Real GDP growth (annual % change, annual average)		
United States	(6.4)	4.5
Eurozone	(8.2)	6.2
Switzerland	(5.5)	4.4
Unemployment rate (annual %, level, 4Q average)		
United States	14.1	7.8
Eurozone	9.8	6.6
Switzerland	3.9	3.4
Real estate (annual % change, 4Q average)		
United States	(2.8)	(1.6)
Eurozone	(10.2)	8.6
Swiss Single-Family Homes	(0.2)	0.5

Note 10 Expected credit loss measurement (continued)

As a consequence of the exceptional circumstances and prevailing uncertainties at the end of the second quarter of 2020, UBS decided to keep the weight allocation consistent with the decision made in the first quarter of 2020, with a 70% weighting assigned to the baseline and a 30% weighting assigned to the global crisis scenario. Overall, these weights still reflect the current sentiment regarding the boundaries of economic outcomes, with a bias toward the updated baseline scenario, but give sufficient credence to the global crisis scenario, thereby accounting for the prospect that the pandemic may not be contained effectively.

Economic scenarios and weights applied

ECL scenario	Assigned weights in % 30.6.20	31.3.20	31.12.19
Upside	0.0	0.0	7.5
Baseline	70.0	70.0	42.5
Mild downside	0.0	0.0	35.0
Global crisis	30.0	30.0	15.0

Sensitivity to different scenario weight combinations and "pro forma all-stage-2" measurement

Expected credit loss (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. UBS reported USD 636 million of ECL allowances and provisions for stage 1 or 2 positions at the end of the second quarter of 2020. If UBS had applied a 100% weight to the baseline scenario or 100% weight to the global crisis scenario, ECL allowances and provisions would have been approximately USD 0.5 billion and USD 1.2 billion, respectively. As a way of comparing IFRS 9 to its US GAAP equivalent standard, if all stage 1 and 2 positions across the portfolio had been measured for lifetime ECL irrespective of whether there was a significant increase in credit risk (SICR) status, with a 70% weight applied to the baseline and 30% to the global crisis scenario, ECL allowances and provisions for positions not subject to credit-impairment would have been approximately USD 1.5 billion.

Source: UBS, Second quarter 2020 report, p. 78-79

3.2.5 SENSITIVITY OF ECL ESTIMATES TO CHANGES IN ASSUMPTIONS & CALCULATION INPUTS (1/6)

MAZARS INSIGHTS:

- **UBS provides a "2-in-1" ECL sensitivity analysis:**
  - 1st analysis: amount of ECL in m$ for stages 1 and 2 supposing each scenario was weighted at 100% (instead of 70% for baseline scenario and 30% for the global crisis scenario, as was done at 30 June 2020)
  - 2nd analysis: amount of ECL in m$ for stages 1 and 2 (at constant scenario weight, i.e. 70% for baseline scenario and 30% for the global crisis scenario, as was done at 30 June 2020), supposing all Stage 1 and Stage 2 exposures were actually measured for lifetime ECL.

Note 10 Expected credit loss measurement (continued)

Sensitivity to different scenario weight combinations and "pro forma all-stage-2" measurement

Expected credit loss (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. UBS reported USD 636 million of ECL allowances and provisions for stage 1 or 2 positions at the end of the second quarter of 2020. If UBS had applied a 100% weight to the baseline scenario or 100% weight to the global crisis scenario, ECL allowances and provisions would have been approximately USD 0.5 billion and USD 1.2 billion, respectively. As a way of comparing IFRS 9 to its US GAAP equivalent standard, if all stage 1 and 2 positions across the portfolio had been measured for lifetime ECL irrespective of whether there was a significant increase in credit risk (SICR) status, with a 70% weight applied to the baseline and 30% to the global crisis scenario, ECL allowances and provisions for positions not subject to credit-impairment would have been approximately USD 1.5 billion.

Source: UBS, Second quarter 2020 report, p. 79

MAZARS INSIGHTS:

- **HSBC** indicates, by geographical area, the ECL amount that would have been reported for each scenario, had it been weighed at 100%. Such alternative weightings are reflected in both the determination of a significant increase in credit risk and the measurement of the resulting ECL.

Wholesale analysis

IFRS 9 ECL sensitivity to future economic conditions[1]

ECL coverage of financial instruments subject to significant measurement uncertainty at 30 June 2020[2]	UK	US	Hong Kong	Mainland China	Canada	Mexico	UAE	France
	$m	$m	$m	$m	$m	$m	$m	$m
Reported ECL	1,729	407	537	157	239	218	227	121
Consensus scenarios								
Central scenario	1,538	336	449	122	208	171	186	104
Upside scenario	1,350	226	348	76	151	137	126	98
Downside scenario[3]	2,027	570	687	211	294	255	262	187
Alternative scenarios								
Alternative Downside scenario	2,933	1,059	1,706	1,273	647	574	711	304
Gross carrying amount/nominal amount[4]	406,516	213,202	433,950	108,954	81,583	27,860	45,614	136,810
ECL coverage of financial instruments subject to significant measurement uncertainty at 31 December 2019[2]								
Reported ECL	725	148	328	124	80	69	97	55
Consensus scenarios								
Central scenario	536	149	243	118	79	68	97	53
Upside scenario	480	132	241	95	63	48	89	50
Downside scenario	635	161	244	106	108	99	108	79
Alternative scenarios								
UK alternative Downside scenario 1	1,050							
Tail risk scenarios (UK alternative Downside scenarios 2 and 3)	1,900 - 2,100							
Asia-Pacific alternative Downside scenario			550	150				
Hong Kong alternative Downside scenario			700					
Gross carrying amount/nominal amount[4]	346,035	203,610	418,102	104,004	74,620	32,632	42,304	124,618

Source: HSBC Holdings plc Interim Report 2020, p. 60-64

Note that a similar analysis is provided in HSBC interim report also for retail exposures. The interim report also includes a narrative explanation of the figures in the tables.

3.2.5 SENSITIVITY OF ECL ESTIMATES TO CHANGES IN ASSUMPTIONS & CALCULATION INPUTS (2/6)

MAZARS INSIGHTS:

- **Barclays PLC** provide a 100%-weighted ECL allowance estimate for all of their 5 scenarios, with a break-down by stage and product type. The dispersion of results around the baseline scenario is an indication of uncertainty around future projections.

ECL under 100% weighted scenarios for modelled portfolios

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 (£30m of ECL), non-modelled exposures and management adjustments.

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 30 June 2020 and not on macroeconomic scenarios.

The Downside 2 scenario represents a global recession with substantial falls in both UK and US GDP. Unemployment in UK and US markets rises to 11% and 19% respectively 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 £50bn 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.

The dispersion of results around the Baseline is an indication of uncertainty around 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 8%.

		Scenarios				
As at 30.06.20	**Weighted**	**Upside 2**	**Upside 1**	**Baseline**	**Downside 1**	**Downside 2**
Stage 1 Model Exposure (£m)						
Home loans	125,380	128,154	127,314	126,404	122,433	112,937
Credit cards, unsecured loans and other retail lending	58,303	63,114	62,525	61,361	58,654	55,410
Wholesale loans	122,594	144,825	145,491	140,318	115,054	93,598
Stage 1 Model ECL (£m)						
Home loans	15	7	8	10	25	273
Credit cards, unsecured loans and other retail lending	592	558	612	636	665	649
Wholesale loans	293	330	317	293	283	271
Stage 1 Coverage (%)						
Home loans	-	-	-	-	-	0.2
Credit cards, unsecured loans and other retail lending	1.0	0.9	1.0	1.0	1.1	1.2
Wholesale loans	0.2	0.2	0.2	0.2	0.2	0.3
Stage 2 Model Exposure (£m)						
Home loans	20,058	17,284	18,124	19,034	23,005	32,501
Credit cards, unsecured loans and other retail lending	23,620	14,746	17,298	21,270	26,748	32,457
Wholesale loans	67,528	45,296	44,631	49,804	75,067	96,523
Stage 2 Model ECL (£m)						
Home loans	75	48	48	55	70	194
Credit cards, unsecured loans and other retail lending	3,715	2,124	2,643	3,527	4,950	6,562
Wholesale loans	2,385	1,378	1,484	1,873	3,349	4,790
Stage 2 Coverage (%)						
Home loans	0.4	0.3	0.3	0.3	0.3	0.6
Credit cards, unsecured loans and other retail lending	15.7	14.4	15.3	16.6	18.5	20.2
Wholesale loans	3.5	3.0	3.3	3.8	4.5	5.0
Stage 3 Model Exposure (£m)						
Home loans	1,750	1,750	1,750	1,750	1,750	1,750
Credit cards, unsecured loans and other retail lending	2,928	2,928	2,928	2,928	2,928	2,928
Wholesale loans[1]	1,864	1,864	1,864	1,864	1,864	1,864
Stage 3 Model ECL (£m)						
Home loans	330	271	273	315	380	465
Credit cards, unsecured loans and other retail lending	2,346	2,277	2,309	2,345	2,392	2,449
Wholesale loans[1]	91	80	83	93	96	109
Stage 3 Coverage (%)						
Home loans	18.9	15.5	15.6	18.0	21.7	26.6
Credit cards, unsecured loans and other retail lending	80.1	77.8	78.9	80.1	81.7	83.6
Wholesale loans[1]	4.9	4.3	4.5	5.0	5.2	5.8
Total Model ECL (£m)						
Home loans	420	326	329	380	475	932
Credit cards, unsecured loans and other retail lending	6,653	4,959	5,564	6,508	8,007	9,660
Wholesale loans[1]	2,769	1,788	1,884	2,259	3,728	5,170
Total Model ECL	**9,842**	**7,073**	**7,777**	**9,147**	**12,210**	**15,762**

1 *Material wholesale loan defaults are individually assessed across different recovery strategies.*

Reconciliation to total ECL	£m
Total model ECL	9,842
ECL from individually assessed impairments on stage 3 loans	1,026
ECL from non-modelled and other management adjustments[1]	(1,166)
Total ECL	**9,702**

1 *Management adjustments of £1.2bn materially reflect estimated impacts from the significant support measures provided by Barclays, central banks and governments across the Group's key markets as a result of the COVID-19 pandemic. Some impacts from these support measures are recognised in the COVID-19 scenarios used to calculate modelled ECL. However, given the uncertain economic environment and the unprecedented policy response to the pandemic, management have reviewed the output of the models across key portfolios to assess the appropriateness of the total ECL and to more fully estimate the impact given the longevity of support measures. Such assessments are inherently uncertain and actual credit losses may differ from the ECL depending on the evolution of the COVID-19 pandemic.*

Source: Barclays PLC, Interim results announcement at 30 2020, p. 36-38

NB: they also provide such data for YE 2019 (cf. p. 39)

3.2.5 SENSITIVITY OF ECL ESTIMATES TO CHANGES IN ASSUMPTIONS & CALCULATION INPUTS (3/6)

MAZARS INSIGHTS:

- **ING Group** presents a « two-in-one » sensitivity analysis:
  - First (1), ECL measurements are provided for each of the three macro-economic scenarios as if it were weighted at 100%, cf. column "un-weighted ECL" (the analysis is made for the main 4 geographical regions where ING Group is operating, i.e. 4 tables in total). If we sup-up the upside scenario at 100% for the 4 main regions, this gives an alternative ECL charge of 1 649 m€ for H1 2020. If we do the same for the downside scenario, this gives an alternative ECL charge of 2 629 m€ for H1 2020 (against a reported weighted-average charge of 1 998 m€).
  - Secondly (2), the ECL parameters from the 3 scenarios weighted at 20%, 60% and 20% are maintained to see how different the ECL charge for H1 would have been, had staging been shocked (i.e. had 100% of Level 1 and Level 2 exposures been subject to Lifetime ECL or had 100% of Level 1 and Level exposures been subject to 12 months ECL)

2

The setting of PD threshold bandings requires management judgement, and is a key source of estimation uncertainty. To demonstrate the sensitivity of the ECL to these PD thresholds bandings, analysis was run on all collectively-assessed assets, which assumed all assets (Stage 1 and 2) were below the threshold, and apportioned a 12 month ECL. On ING Group level, the total ECL collective-assessment for performing assets is €2,129 million (2019: €1,291 million). On the same asset base, analysis was run which assumed all performing assets were above the threshold, and apportioned a lifetime ECL. This gave rise to a hypothetical collective-assessment ECLs €1,636 million (2019: €866 million) and €3,409 million (2019: €2,665 million) respectively. Please note that in this analysis all other ECL risk parameters (except for the stage) were kept equal.

It should be noted that the lifetime PD thresholds are not the only drivers of stage allocation. An asset can change stages as a result of being in arrears, on a Watch List or being forborne, among other triggers.

1

Analysis on sensitivity (*)

Based on the above, analysis on the sensitivity of key forward-looking macroeconomic inputs used in the ECL collective-assessment modelling process and the probability-weights applied to each of the three scenarios is presented below. The countries included in the analysis are the Group's most significant geographic regions, in terms of both gross contribution to reportable ECL, and sensitivity of ECL to forward-looking macroeconomics. Accordingly, the Group considers these portfolios to present the most significant risk of resulting in a material adjustment to the carrying amount of financial assets within the next financial year. The Group also observes that, in general, the Wholesale business is more sensitive to the impact of forward-looking macroeconomic scenarios.

While the table does give a high-level indication of the sensitivity of the outputs to the different scenarios, it does not provide insight on the interdependencies and correlations between different macroeconomic variable inputs.

Sensitivity analysis (*)[1,2,3]

		2020	2021	2022	Un-weighted ECL (Eur mln)	Probability-weighing	Reportable ECL (Eur mln)[4]
Netherlands							
Upside scenario	Real GDP	-6.0	5.2	3.9			
	Unemployment	4.9	4.4	3.8	476	20%	
	HPI	3.7	14.7	5.3			
Baseline Scenario	Real GDP	-6.3	4.0	2.3			
	Unemployment	5.3	5.4	5.4	536	60%	559
	HPI	-0.2	0.8	3.2			
Downside scenario	Real GDP	-6.9	0.6	0.1			
	Unemployment	6.2	7.5	8.3	708	20%	
	HPI	-4.4	-14.4	0.3			

Source: ING Group, Condensed consolidated interim financial information for the period ended 30 June 2020, p. 19-20

Similar tables are presented as well for the other most significant geographical regions (Germany, Belgium and United States) on p. 19 of the interim report

3.2.5 SENSITIVITY OF ECL ESTIMATES TO CHANGES IN ASSUMPTIONS & CALCULATION INPUTS (4/6)

MAZARS INSIGHTS:

- **UniCredit** present the impact (in basis points) of a 1% decrease in GDP :

In order to estimate the sensitivity of Expected Credit Loss to changes in macroeconomic scenario, the increase in LLP due to the scenario update performed in March 2020 is divided by the change in GDP forecasts between March 2020 and December 2019. The following assumptions are made:

- GDP is assumed to be the most relevant variable as indicator of the severity of the scenario;
- given that most of the shock is concentrated in the 2020, the GDP change is considered for 2020;
- the main Legal Entities of the Group are considered, assigning to each of them a GDP change based on each respective country.

The result is that in case of a decrease of 1 GDP percentage point for the main geographies of the Group, the impact would be an increase in a range of 1 to 2 basis points of Group Cost of Risk, of which around half is related to UniCredit S.p.A.

Source: UniCredit, Consolidated Financial Statements – 30.06.2020, p. 161-162

MAZARS INSIGHTS:

- **Commerzbank** shocked the assumptions of the central scenario by assuming a new wave of infection in Q4 2020 (the potential impact on the ECL for stages 1 and 2 is presented in bn €):

In determining risk provisions, it is necessary to make assumptions that are subject to high estimation uncertainty, particularly in a dynamic environment. On the reporting date, the expected credit loss (stages 1/2), calculated on the basis of the baseline scenario giving consideration to the ECB publication, was €1.0bn. In a stress scenario where the slow economic recovery ends abruptly in the fourth quarter due to a massive new wave of infection, resulting in further lockdowns and a prolonged global recession, one of several negative effects on earnings would be an increase in the expected credit loss (stage 1/2) by €0.4bn.

Source: Commerzbank, Interim report as at 30 June 2020, p. 72

MAZARS INSIGHTS:

- **Société Générale** presents the outcome (in m€) of a modified weighting of the different scenarios :

The Covid-19 crisis represents an unprecedented shock and the risk of downward adjustment of the economic expectations due to the evolution of the pandemic remains significant. The risk of deterioration of the economic situation including a possible systemic crisis remains.

To reflect these uncertainties in the calculation of expected credit losses, the cumulated weight of the two pessimistic scenarios is fixed at 30% (25% for SG Prolonged and 5% for SG Tail Risk), representing almost the double of the weighting usually applied to the stressed scenario (weighted at 16% on 31 December 2019).

The scenario of a quick exit from the pandemic (SG Quick Exit) is considered unlikely with a weighting limited at 5%, this weighting remaining lower than the probability generally used for the optimistic scenario (weighted at 10% on 31 December 2019).

The central scenario has a probability of 65% (versus 74% on 31 December 2019).

In order to perform the budgetary projections used for the impairment tests of goodwill and deferred tax assets, only the SG Base and SG Prolonged scenarios have been retained with respective weightings of 70% and 30%.

On the basis of the scenarios and weightings mentioned above, and after taking into account the methodological adjustments and support measures, the calculation of expected credit losses led the Group to record a loss in Cost of risk of 2,099 million euros on 30 June 2020 i.e. an increase of 1,521 million euros (263%) compared to 30 June 2019.

If a weighting of 60% was used for the SG Base central scenario, of 30% for the SG Prolonged scenario and of 5% for the two extreme SG Tail Risk and SG Quick Exit scenarios, the impact would be an extra allocation of 41 million euros.

Source: Société Générale, Consolidated Financial Statements – 30.06.2020, p. 15

3.2.5 SENSITIVITY OF ECL ESTIMATES TO CHANGES IN ASSUMPTIONS & CALCULATION INPUTS (5/6)

MAZARS INSIGHTS:

- **Crédit Agricole** presents the impact (as a % of increase of the ECL allowance) due to a modification of the weighting of the macro-economic scenarios, with the more pessimistic scenario receiving more weight compared to the weighting used at 30 June.

NOTE 2 Major structural transactions and material events during the period

2.1 The COVID-19 health crisis

2.1.4 Credit risk assessment

Sensitivity analyses of ECL amounts

As an example, a 10-point reduction in the weighting of scenario 1 in the calculations at 30/06/2020 in favour of scenario 3, which is significantly less desirable, would lead to a change in forward-looking central ECL inventory of around 5% of total ECL inventory. However, such a change in weighting would not necessarily have a significant impact due to forward-looking local adjustments, which could mitigate the effect.

Source: Crédit Agricole, Condensed interim consolidated financial statements as at 30 June 2020, p. 20

MAZARS INSIGHTS:

- **BNP Paribas** presents the impact (as an increase in m€ and in % of the ECL) due to a modification of the weighting of the macro-economic scenarios, with the more adverse scenario receiving more weight compared to the weighting used at 30 June

2.h COST OF RISK

Forward Looking Information

At 30 June 2020, the weighting of the adverse scenario is 19 % for the Group (31 % for the favourable scenario), versus 26 % at 31 December 2019 (24 % for the favourable scenario), reflecting a position below the average of the credit cycle at 30 June 2020 in the context of the current health crisis and the associated containment measures.

The Group's ECL is slightly higher than the one determined based on the baseline scenario. Applying an equal weighting to favourable and adverse scenario (25%) would lead to a EUR 100 million increase, representing 2%, in expected losses.

Source: BNP Paribas, Consolidated financial statements – first half 2020, p. 53

3.2.5 SENSITIVITY OF ECL ESTIMATES TO CHANGES IN ASSUMPTIONS & CALCULATION INPUTS (6/6)

MAZARS INSIGHTS:

- **BPCE** does not provide the exact impact in m€, but indicates that less favourable forecasts of major macro-economic variables (such as PIB growth rates, oil or assets prices) could result in similar (or slightly higher) cost of risk levels compared to those observed in Q1 2020.

1.5 INCIDENCE DE LA CRISE SANITAIRE SUR LES COMPTES

1.5.2 Conséquences sur le recours à des estimations

1.5.2.1 Dépréciation du risque de crédit

Sur le portefeuille de la Banque de Grande Clientèle, un test de sensibilité du coût du risque a été conduit avec un scénario macroéconomique sévère. Ce dernier ferait notamment état d'une baisse du PIB français (baisse d'environ 10 % en 2020 et une remontée de 5 % en 2021) et d'hypothèses sévères concernant les secteurs d'expertise de la BGC : modeste remontée des prix du pétrole vers leurs niveaux de début avril 2020 et haircuts significatifs sur les prix des actifs réels (par exemple de l'ordre de 45 % sur les avions et de l'ordre de 15 % sur l'immobilier). Dans un tel scénario, le coût du risque de la Banque de Grande Clientèle sur l'ensemble de l'année 2020 pourrait être en ligne ou modérément supérieur, avec celui - en points de base - observé au 1er trimestre 2020.

Source: Groupe BPCE, Consolidated IFRS financial statements as at 30 June 2020, p. 16

MAZARS INSIGHTS:

- **Deutsche Bank** discloses the impact in m€ on ECL of a downward and upward shift (by 1 standard deviation above or below the baseline forecasts) in macroeconomic variables such as GDP rates.

IFRS 9 impairment approach

Forward-looking information

In order to illustrate the sensitivity of our model with respect to future changes in macroeconomic variables (MEVs) we have calculated the ECL impact for stages 1 and 2 in a Downward and Upward shift across all scenarios used in the ECL calculation. Both shifts are applied to MEV forecasts as of June 30, 2020 by specifying Downward and Upward MEV values that are all either one standard deviation above or below the baseline forecasts, e.g. reducing forecasted GDP rates by 2 percentage points on average. The Downward shift resulted in an ECL increase of € 802 million whereas the Upward shift reduced ECL by € 439 million. All sensitivity calculations have been conducted with averaging GDP and unemployment rates.

Source: Deutsche Bank, Interim Report as of June 30 2020, p. 82

3.2.6 INFORMATION RELATING TO SECTORS MOST AFFECTED BY COVID-19 (1/3)

MAZARS INSIGHTS:

- **Barclays PLC** disclose detailed information on their exposure to sectors impacted by COVID-19, with a break-down of gross exposure and impairment allowance by stage of impairment for each of these sectors.

MAZARS INSIGHTS:

- **ING Group** specifically identifies, below the ECL reconciliation tables, the transfers into Stage 2 that relate to exposures to sectors affected by COVID-19.

Loan Loss Provisioning (*)

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

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 €4.7 billion, €2.1 billion, €2.0 billion and €1.7 billion respectively. These sectors represent 12%, 9%, 9% and 8% of the total Stage 2 gross carrying amounts respectively.

Source: ING Group, Condensed consolidated interim financial information for the period ended 30 June 2020, p. 15

Credit Risk

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.

	Gross exposure				Impairment allowance			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
As at 30.06.20	£m	£m	£m	£m	£m	£m	£m	£m
Air travel	1,018	462	69	1,549	-	14	25	39
Hospitality and leisure	3,567	3,600	236	7,403	18	121	75	214
Oil and gas	1,427	2,389	407	4,223	19	99	185	303
Retail	2,954	2,260	297	5,511	37	46	101	184
Shipping	355	369	6	730	1	8	3	12
Transportation	818	358	119	1,295	4	21	46	71
Total	**10,139**	**9,438**	**1,134**	**20,711**	**79**	**309**	**435**	**823**
Total of Wholesale exposures	**9%**	**22%**	**33%**	**13%**	**34%**	**34%**	**41%**	**37%**

	Gross exposure				Impairment allowance			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
As at 31.12.19	£m	£m	£m	£m	£m	£m	£m	£m
Air travel	194	31	26	251	-	-	24	24
Hospitality and leisure	4,321	851	199	5,371	8	18	29	55
Oil and gas	2,539	612	136	3,287	8	24	47	79
Retail	3,395	777	207	4,379	11	24	85	120
Shipping	357	52	7	416	1	-	3	4
Transportation	873	82	89	1,044	5	5	54	64
Total	**11,679**	**2,405**	**664**	**14,748**	**33**	**71**	**242**	**346**
Total of Wholesale exposures	**10%**	**23%**	**28%**	**11%**	**23%**	**24%**	**44%**	**35%**

The coverage ratio for selected sectors has increased from 2.3% as at 31 December 2019 to 4.0% as at 30 June 2020. Exposure to UK commercial real estate of £9.0bn, excluding government backed schemes, was in line with 31 December 2019 (£9.1bn). Coverage increased from 0.56% to 0.85% in the period.

Source: Barclays PLC, Interim results announcement at 30 2020, p. 28

3.2.6 INFORMATION RELATING TO SECTORS MOST AFFECTED BY COVID-19 (2/3)

MAZARS INSIGHTS:

- **Groupe BPCE** discloses its sectorial approach to integrating forward-looking information.

1.5.2 Conséquences sur le recours à des estimations

1.5.2.1 Dépréciation du risque de crédit

Stress-tests sectoriels : pour les réseaux Banque Populaire et Caisse d'Epargne, une déclinaison sectorielle du scénario central a été appliquée au 2ème trimestre 2020 pour le calcul des pertes de crédits attendues.

Les projections de pertes de crédit attendues reposent sur le scénario central (déterminé dans le cadre de l'exercice de stress-test Covid-19 de la BCE mené fin mai 2020) avec la détermination, à dire d'expert, de scénarii de reprise secteur par secteur afin de projeter les dégradation de notations.

Ce travail, qui couvre l'intégralité du portefeuille de crédits du groupe, a porté sur 121 secteurs d'activité. Parmi les secteurs les plus sensibles à la crise figurent notamment le transport, l'automobile, la distribution, l'hôtellerie et le tourisme.

Cette méthodologie aboutit à un montant de 553 millions d'euros de pertes de crédit attendues sur les Statut 1 et Statut 2, après prise en compte, le cas échéant, de compléments de provisions sur des secteurs jugés plus sensibles dans certaines régions.

Source: Groupe BPCE, Consolidated IFRS financial statements as at 30 June 2020, p. 16

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3.2.6 INFORMATION RELATING TO SECTORS MOST AFFECTED BY COVID-19 (3/3)

MAZARS INSIGHTS:

- **Deutsche Bank** explains that sectors that suffered from severe direct or indirect impacts of COVID-19 (**such as** commercial real estate including hotels and non-food retail, oil & gas, retail excluding food, aviation, leisure, etc.). represent approximately **30 % of the group's credit loss provisions** in the first half of 2020.

Measures in context of Covid-19 pandemic

Focus Industries in light of COVID-19 pandemic

To manage industry-specific risks, we group our corporate and financial institutions counterparties into various industry sub-portfolios. Risk appetite thresholds are set for aggregate credit limits to counterparties and net market values of Traded Credit Positions within each industry sub-portfolio.

Portfolios are regularly reviewed with the frequency of review according to our industry risk assessment and portfolio risk profile. Industry portfolio reviews highlight industry developments and risks to our credit portfolio, review cross-risk concentration risks, analyze the risk/reward profile of the portfolio and incorporate the results of an economic downside stress test. These analyses are used to define risk strategies and risk appetite thresholds for the portfolio in question. In addition, regular cross-industry portfolio overviews are prepared for the Enterprise Risk Committee to discuss recent developments, review adherence to industry thresholds set and to agree on actions where necessary.

We assess industry risk using a range of economic indicators, specific industry performance indicators, related market indicators, as well as expert views on longer term emerging risk topics. Based on these we assign risk flags to each subsector.

While the negative implications of the COVID-19 crisis are materializing across economies and sectors globally, certain industries are seeing particularly severe direct or indirect impacts. These sectors accounted for approximately 30 % of group CLPs in the first half of 2020.

– Commercial Real Estate (€ 30 billion loan exposure): Commercial Real Estate (CRE) is facing a severe impact across a number of segments, with Hotels and non-Food Retail most affected due to closures, tenant rent deferral requests or tenant defaults. Multifamily, Office, Industrial & Logistics sectors are seeing a more contained impact. CRE exposure (comprises Commercial Real Estate Group, APAC CRE exposures in the Investment Bank and non-recourse CRE business in the Corporate Bank) accounts for 7 % of the loan book with quarter-on-quarter reduction mainly reflecting lower non-recourse balances in CB following reassessment of recourse status. Portfolios are managed to tight underwriting standards with regular stress tests under conservative assumptions. Going into the crisis average LTVs across the portfolio were low (< 60 %) providing a substantial buffer to absorb potential declines in collateral prices. Our exposures to non-Food Retail is contained. Hotel exposures are concentrated in the U.S. and benefit from significant sponsor equity in the assets and demonstrated support in most cases.
– Oil & Gas (€ 8 billion loan exposure): Significant fall in travel and trade volumes, as well as the wider economic downturn, have led to a meaningful contraction of demand for oil and a significant fall in prices (now partly recovered). There have been a number of bankruptcies among smaller / weaker companies – especially in North America - in recent months. Our loan exposure to the sector accounts for less than 2 % of our total loan book, and while we are seeing a downward migration of credit ratings among our clients, the portfolio risk is mitigated by its focus on the more resilient Oil & Gas Majors and National Oil & Gas companies. More than 80 % of net credit limits are to investment grade rated clients. Our exposure to the higher risk "shale" companies in North America is small since we have realigned our portfolio in recent years.
– Retail (excluding Food/Staples) (€ 4 billion loan exposure): The impact of lockdowns and a drop in consumer confidence have added to the structural challenges the retail industry is facing – including digitalization and shifting consumer preferences. Consequently, we are seeing a downward migration of credit ratings within our portfolio. Loan exposure has fallen by ~ € 1 billion in the second quarter of 2020 and accounts for ~1 % of the total loan book. Portfolio risks are mitigated by a focus on strong global brands with approximately two thirds of net credit limits to investment grade rated clients.
– Aviation (€ 4 billion loan exposure): The industry is going through its deepest crisis in history. The International Air Transport Association expects substantial losses across the sector, and bankruptcies have been observed among weaker airlines. Our loan exposure accounts for ~1 % of total and portfolio risks are mitigated by a significant share of secured aircraft financing which is biased towards newer / liquid aircraft. The unsecured portfolio is focused on developed market flag carriers, many of which benefit from robust government support packages.
– Leisure (€ 2 billion loan exposure): The industry has been hit by a very sharp decline in both business and private travel during lockdowns and it is unlikely that volumes will recover to pre-crisis levels in the near-term. Loan exposure is contained at well under 1 % of the total loan book, with a focus on industry leaders in the Hotels and Casinos segment, mostly domiciled in the US market. We have very limited exposure to Tour Operators and Cruise Lines.

Source: Deutsche Bank, Interim Report as of June 30 2020, p. 39-40

3.2.7 FACTORS OF UNCERTAINTY UNDERPINNING THE ECL CALCULATION (1/2)

MAZARS INSIGHTS:

- Many banks in our sample have underlined the subjectivity inherent in ECL calculation, largely due the high degree of uncertainty when it comes to future developments of COVID-19 and its impact on the economy.
- Some of them have identified detailed sources of the uncertainty, as per example provided on this page.

Note 10 Expected credit loss measurement (continued)

b) Changes to ECL models, scenarios, scenario weights and key inputs

The outlook for the global economy has deteriorated markedly since the end of 2019 as a result of the COVID-19 outbreak. COVID-19 and related lockdown measures have significantly impacted major economies across the world. Uncertainties are still at a high level, making predictions difficult and displaying several potential triggers for further negative developments.

Source: UBS, Second quarter 2020 report, p. 78

Measurement uncertainty and sensitivity analysis of ECL estimates

The main factors that affect uncertainty across our key markets are:

- epidemiological concerns, including a possible resurgence of Covid-19 later in 2020 and in 2021;
- the ability of new or continued restrictions in individual markets to affect global growth due to deep cross-border trade and financial linkages;
- the ability of governments and central banks to continue to limit the economic damage through support measures;
- the potential for other geopolitical and macroeconomic risks to affect growth and economic stability as the world recovers from Covid-19-related restrictions; and
- market-specific differences in the progression of Covid-19 and the associated responses by public authorities that imply differentiation in the degree of uncertainty across our key markets. Earlier progression of Covid-19 in Hong Kong and in mainland China meant that economic forecasts for these markets demonstrated greater stability over the course of 2Q20 compared with the UK, where a rapidly evolving situation has led to a higher degree of uncertainty.

Economic forecasts and data released since the creation of scenarios in May confirmed the view of elevated uncertainty in some markets such as in the UK, where monthly GDP and unemployment data suggested a larger degree of estimation error than usual in short-term forecasts. The volatility in economic data and forecasts received since the generation of scenarios has been considered by management and is reflected in management's choice of scenarios, in probability weights and in its assessment of ECL outcomes.

Critical accounting estimates and judgements

The calculation of ECL under IFRS 9 involves significant judgements, assumptions and estimates, as set out in the *Annual Report and Accounts 2019* under 'Critical accounting estimates and judgements'. The level of estimation uncertainty and judgement has increased since 31 December 2019 as a result of the economic effects of the Covid-19 outbreak, including significant judgements relating to:

- the selection and weighting of economic scenarios, given rapidly changing economic conditions in an unprecedented manner, uncertainty as to the effect of government and central bank support measures designed to alleviate adverse economic impacts, and a widening in the distribution of economic forecasts. The key judgement is whether the economic effects of the pandemic are more likely to be temporary or prolonged, and the shape of recovery;
- estimating the economic effects of those scenarios on ECL, where there is no observable historical trend that can be reflected in the models that will accurately represent the effects of the economic changes of the severity and speed brought about by the Covid-19 outbreak. Modelled assumptions and linkages between economic factors and credit losses may underestimate or overestimate ECL in these conditions, and there is significant uncertainty in the estimation of parameters such as collateral values and loss severity; and
- the identification of customers experiencing significant increases in credit risk and credit impairment, particularly where those customers have accepted payment deferrals and other reliefs designed to address short-term liquidity issues, or have extended those deferrals, given limitations in the available credit information on these customers. The use of segmentation techniques for indicators of significant increases in credit risk involves significant estimation uncertainty.

Source: HSBC Holdings plc Interim Report 2020, p. 57, p. 60

3.2.7. FACTORS OF UNCERTAINTY UNDERPINNING THE ECL CALCULATION (2/2)

Drivers of loan impairment charge

	Q120 £m	Q220 £m	Total £m
Impairment charge generated using scenarios before COVID-19	370	424	794
Single name wholesale loan charges	405	186	591
Loan impairment charge prior to impact of COVID-19 scenarios	**775**	**610**	**1,385**
Impact of COVID-19 scenarios and weights	1,190	1,163	2,353
Specific charge in respect of exposures to selected sectors	300	(150)	150
Incorporation of provision for UK economic uncertainty	(150)	-	(150)
Total loan impairment charge	**2,115**	**1,623**	**3,738**

The impact of the COVID-19 scenarios and weighting adjustments has resulted in a £2,353m increase in ECL from the pre-COVID scenarios, primarily driven by forecasts for a prolonged period of UK and US unemployment.

Estimated effects from the significant support measures provided by Barclays, central banks and governments across the Group's key markets as a result of the COVID-19 pandemic have been factored into the calculation of the Group's loan impairment charge.

The £300m provision taken in Q120 in respect of oil price risk has been released given the Q2 rebound in oil prices and residual risk on the energy sector has been recognised in a Q2 charge of c.£150m under the COVID-19 scenarios and weights. A specific charge of £150m in respect of exposures to selected sectors represents additional provisions taken in Q220 in response to the current slowdown, in particular in the hospitality and retail sectors.

The £150m provision for UK economic uncertainty held at the year-end was incorporated within the updated scenarios in Q1.

Measurement uncertainty

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.

Credit Risk

The dispersion of results around the Baseline is an indication of uncertainty around 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 8%.

Source: Barclays PLC, Interim results announcement at 30 2020, p. 32, p. 36 & 38

1.4 Significant judgements and critical accounting estimates and assumptions

The preparation of the Condensed consolidated interim financial statements requires management to make judgements in the process of applying its accounting policies and to use estimates and assumptions. The estimates and assumptions affect the reported amounts of the assets and liabilities and the amounts of the contingent assets and contingent liabilities at the balance sheet date, as well as reported income and expenses for the period. The actual outcome may differ from these estimates. The process of setting assumptions is subject to internal control procedures and approvals.

As discussed in Note 1.5 ' Significant judgements and critical accounting estimates and assumptions' of the 2019 ING Group Consolidated financial statements, ING Group has identified the following 3 areas that require management to make significant judgements and use critical accounting estimates and assumptions based on the information and financial data that may change in future periods:

- The determination of the fair values of financial assets and liabilities;
- Loan loss provisions; and
- Provisions.

These areas continue to be relevant for these Condensed consolidated interim financial statements, and, in particular, an increased level of estimation uncertainty is observed for Loan loss provisions due to Covid-19 outbreak and determination of the fair values of financial assets and liabilities due to market developments in the first six months of 2020.

In addition to the disclosures in the 2019 Annual Report of ING, the increased uncertainty for Loan loss provisions from Covid-19 manifested itself in the following key areas: the uncertainty around macroeconomic forecasts and the period and duration of the economic recovery path; uncertainty around determining when there has been a significant increase in credit risk, especially in the light of government measures such as payment holidays where traditional risk drivers in ECL models based on payment behavior can be ineffective as these clients are not required to make regular payments and limited (if any) additional information is available. For further discussion and details of the significant judgements and critical accounting estimates and assumptions relating to the Loan loss provisions, reference is made to paragraph 'Loan loss provisioning' in the 'Risk management' section of the interim report.

Source: ING Group, Condensed consolidated interim financial information for the period ended 30 June 2020, p. 33-34

3.3 FINANCIAL INSTRUMENT-RELATED EXTRACTS OTHER THAN THOSE RELATING TO ECL

- **3.3.1**: Accounting treatment of "COVID-19" state-guaranteed loans
- **3.3.2:** Accounting treatment of moratorium measures / payment holidays
- **3.3.3:** Impacts on the valuation of financial instruments (IFRS 13)
- **3.3.4:** Other implications with regards to financial instruments:
  - Hedge accounting
  - Investments of the insurance subsidiaries / activities that do not yet apply IFRS 9

3.3.1 ACCOUNTING TREATMENT OF "COVID-19" STATE-GUARANTEED LOANS (1/3)

MAZARS INSIGHTS:

- All 4 French banks included in our sample provide more or less detail as to the accounting treatment of "COVID-19" state-guaranteed loans that embedded specific features and optionalities (the disclosures presented below may be considered as the most complete from all the banks in our sample when it comes to the accounting-related aspects)

COVID-19 SUPPORT MEASURES

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 granting of State guaranteed loans.

Thus, the Group offers until the end of the year to its customers affected by the crisis (professionals and corporate customers) the allocation of State guaranteed loans (*PGE*) within the framework of the 2020 French Amending Finance Act and the conditions set by the Ministerial order of 23 March 2020. These financings are granted at cost and are guaranteed by the French State up to 90% (with a waiting period of two months after the disbursement at the end of which the guarantee period begins). The amount of the loan is generally limited to a maximum amount equal to three months of the borrower's 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. The conditions for the remuneration of the guarantee are set by the State and shall be applied by all French banking institutions: the bank keeps only a share of the guarantee premium paid by the borrower (the amount of which depends on the size of the borrowing company and the maturity of the loan) corresponding to the risk it bears and which corresponds to the part of the loan that is not guaranteed by the State (i.e. between 10 and 30% of the loan depending on the size of the borrowing company). PGE granted to large corporates must be previously approved by the State and their contractual characteristics may differ from those mentioned above.

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 30 June 2020, the carrying amount of the State guaranteed loans is approximately 12.5 billion euros (almost entirely classified in Stage 1 for measurement of expected credit losses) and new State guaranteed loans will be granted until the deadline for granting set by the State on 31 December 2020.

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 30 June 2020 for all of the State guaranteed loans is approximately 50 million euros.

Source: Société Générale, Consolidated Financial Statements – 30.06.2020, p. 16

1.5.1.1 Prêts garantis par l'Etat (PGE)

Le prêt garanti par l'Etat (PGE) est un dispositif de soutien mis en place en application de l'article 6 de la loi n°2020-289 du 23 mars 2020 de finances rectificative pour 2020 et de l'arrêté du Ministre de l'Economie et des Finances du 23 mars 2020 accordant la garantie de l'Etat aux établissements de crédit et sociétés de financement à partir du 16 mars 2020 afin de répondre aux besoins de trésorerie des sociétés impactées par la crise sanitaire Covid-19. Le PGE doit répondre aux critères d'éligibilité communs à tous les établissements distribuant ce prêt et définis par la loi.

Le PGE est un prêt de trésorerie d'une durée d'un an qui comporte un différé d'amortissement sur cette durée. Les sociétés bénéficiaires pourront décider, à l'issue de la première année, d'amortir le PGE sur une durée d'une à cinq années supplémentaires.

Pour les sociétés éligibles, le montant du PGE est plafonné, dans le cas général (hors entreprises innovantes et de création récente), à 25 % du chiffre d'affaires de la société. Le PGE bénéficie d'une garantie de l'Etat à hauteur de 70 à 90 % selon la taille de l'entreprise, les banques conservant ainsi la part du risque résiduel. La garantie de l'Etat couvre un pourcentage du montant restant dû de la créance (capital, intérêts et accessoires) jusqu'à la déchéance de son terme. La garantie de l'Etat pourra être appelée avant la déchéance du terme en présence d'un évènement de crédit.

La pénalité de remboursement anticipé est fixée au contrat et de manière raisonnable (2% du capital restant dû pendant la période initiale du prêt, de 3 à 6% du capital restant dû pendant la période d'amortissement du prêt). Les conditions de prorogation ne sont pas fixées par anticipation mais établies deux à trois mois avant l'échéance de l'option de prorogation, en fonction des conditions de marché.

Les PGE ne peuvent pas être couverts par une autre sûreté ou garantie que celle de l'Etat sauf lorsqu'ils sont octroyés dans le cadre d'un arrêté du Ministre de l'Economie et des Finances. Il est admis que le professionnel ou le dirigeant puisse demander ou se voir proposer, la souscription d'une assurance décès, mais pas se la faire imposer.

Compte-tenu de ces caractéristiques, les PGE répondent aux critères de prêts basiques (cf. note 2.5.1). Ils sont comptabilisés dans la catégorie « coût amorti » puisqu'ils sont détenus dans un modèle de gestion de collecte dont l'objectif est de détenir les prêts pour en collecter les flux de trésorerie (cf. note 2.5.1). Lors des arrêtés ultérieurs, ils seront évalués au coût amorti selon la méthode du taux d'intérêt effectif.

Concernant la garantie de l'Etat, elle est considérée comme faisant partie intégrante des termes du contrat et est prise en compte dans le calcul des dépréciations pour pertes de crédit attendues. La commission de garantie payée à l'octroi du crédit par le Groupe BPCE à l'Etat est comptabilisée en résultat de manière étalée sur la durée initiale du PGE selon la méthode du Taux d'Intérêt Effectif (TIE). L'impact est présenté au sein de la marge nette d'intérêt.

Un PGE octroyé à une contrepartie considérée douteuse à l'initiation (Statut 3) est classé en POCI (Purchased or Originated Credit Impaired).

Au 30 juin 2020, 156 004 PGE ont été émis par le Groupe BPCE pour un montant de 25,7 milliards d'euros (dont 143 131 ont été décaissés au 30 juin pour un montant de 21,3 milliards d'euros)

Source: Groupe BPCE, Consolidated IFRS financial statements as at 30 June 2020, p. 14

3.3.1 ACCOUNTING TREATMENT OF "COVID-19" STATE-GUARANTEED LOANS (2/3)

MAZARS INSIGHTS:

- The disclosures below provided by **UniCredit** include the allocation by stages of the IFRS 9 impairment model of "COVID-19" loans.

Section 2 - Risks of the prudential consolidated perimeter

2.1 Credit risk

Effects arising from Covid-19 pandemic

The following table shows the volume and the amounts of loans subject to public guarantees originated by the Group as at 30 June 2020.

COUNTRIES	NO. (THOUSAND)	GROSS BOOK VALUE (€ MILLION)	NET BOOK VALUE (€ MILLION)
Italy	75	3,206	3,184
Germany	5	516	514
Austria	1	150	148
CEE	3	108	107
Total	**84**	**3,980**	**3,953**

Regarding the above reported loans, 4.8% (€191 million) were classified under Stage 2, while 0.1% under Stage 3 (€5 million).

Source: UniCredit, Consolidated Financial Statements – 30.06.2020, p. 154

MAZARS INSIGHTS:

- In **Germany, Deutsche Bank** mentioned that is derecognised some of the loans subject to the public guarantee schemes.

Impact of COVID-19

Moratoria, Government Assistance and Grants

Government Assistance via Guarantees and Sponsored Lending for COVID-19 Impacted Borrowers

After the outbreak of the COVID-19 pandemic, a number of states issued programs offering guarantee schemes for borrowers impacted by COVID-19. The Group has provided approximately € 1.4 billion of loans of which € 0.2 billion qualify for derecognition as these loans meet the pass-through criteria for financial instruments under IFRS 9. These newly originated loans and advances subject to a public guarantee scheme are mainly guaranteed by KfW, a government-owned promotional bank and also via similar loan guarantees offered by the Luxembourg Public Investment Bank and by the Ministry of Economic Affairs and Digital Transformation (MINECO) of Spain.

Source: Deutsche Bank, Interim Report as of June 30 2020, p. 55

3.3.1 ACCOUNTING TREATMENT OF "COVID-19" STATE-GUARANTEED LOANS (3/3)

MAZARS INSIGHTS:

- State-guaranteed loans have also been mentioned by the Spanish banks (both **Santander** and **BBVA** indicate that the growth on loan volumes was in part due to ICO *(Instituto de Crédito Oficial)* guaranteed loans granted in Spain. **BBVA** also refers to Paycheck Protection Program in the United States).
- **BBVA** describes how the state guarantees are integrated in the calculation of expected credit losses.

Credit risk

The calculation of the **expected credit losses** at the end of June includes:

- Amongst the diverse economic support measures implemented in the different geographical areas where the Group operates, stand out the granting of relief measures in terms of temporary payment deferments for customers affected by the pandemic, as well as the granting of loans, especially to companies and SMEs, which count on **public guarantees**. These measures are supported by the rules issued by the authorities of the geographical areas where the Group operates as well by certain industry agreements and should help to ease the temporary liquidity needs of the customers. The classification of the customers' credit quality and the calculation of the expected credit loss, once the credit quality of those customers will have been reviewed under the new circumstances, will depend on the effectiveness of these relief measures. In any case, the incorporation of public guarantees is considered to be a mitigating factor in the estimation of the expected credit losses.

Source: BBVA Group, Interim Consolidated Report 2020, Interim consolidated management report, p. 21

3.3.2 ACCOUNTING TREATMENT OF MORATORIUM MEASURES / PAYMENT HOLIDAYS – 1/6

MAZARS INSIGHTS:

- **UniCredit** disclosed detailed information on moratorium, as for instance:
  - impact on staging / assessment of significant increase in credit risk is explained separately for EBA-compliant moratoria and non EBA-compliant moratoria,
  - and break-down by stages is provided for assets subject to payment relief measures

2

The following table shows the volumes and amounts of moratoria provided by the Group as at 30 June 2020. With regard to the Non-EBA compliant moratoria, volumes and amounts reported refer to the exposures classified as forborne in compliance with the clarifications provided by European Central Bank for the submission of the associated reporting.

	EBA COMPLIANT MORATORIA			NON EBA COMPLIANT MORATORIA		
COUNTRIES	NO. (THOUSAND)	GROSS BOOK VALUE (€ MILLION)	NET BOOK VALUE (€ MILLION)	NO. (THOUSAND)	GROSS BOOK VALUE (€ MILLION)	NET BOOK VALUE (€ MILLION)
Italy	108	17,345	16,926	1	360	351
Germany	3	47	47	-	21	20
Austria	7	691	677	1	1,013	999
CEE	250	8,813	8,471	2	310	273
Total	**368**	**26,896**	**26,121**	**4**	**1,704**	**1,643**

Regarding the above reported exposures, 18% (€4,946 million) were classified under Stage 2, while 1% under Stage 3 (€362 million).

Source: UniCredit, Consolidated Financial Statements – 30.06.2020, p. 153-54

1

Section 2 - Risks of the prudential consolidated perimeter

2.1 Credit risk

Effects arising from Covid-19 pandemic

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 made a set of 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 meet the definition of "General Payment" (either legislative or assimilated non-legislative ones) issued by the "Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the Covid-19 crisis"[21], 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

Specific guidelines have been established for rating assignment with the request for a forward-looking perspective to be adopted for 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.
In accordance with the ESMA statement[22], which clarified that contractual modifications arising from such moratoria are unlikely to be considered as substantial, the Group has not derecognised any of the related credit exposures[23].

Regarding the credit exposures subject to moratoria, a modification loss for -€7 million was recognised where increases in future payments was deemed not sufficient for remunerating the Group for the period of delay, also considering local laws and regulation. In these cases, the modification loss was calculated as the difference between the gross carrying amount and net present value of future cash flows (determined in light of the payment delay arising from the moratoria), discounted at the original interest rate.

With reference to the Significant Increase in Credit Risk (SICR), the Authorities' statements (IASB, ESMA and EBA[24]) specified that IFRS9 guidance shall not be applied mechanistically, but that the SICR assessment is expected to differentiate debtors whose credit standing is significantly affected by the current situation in the long term, from those that are likely to restore their credit worthiness also considering mitigation in form of collateral or public guarantees. Therefore, the acceptance of terms set out in general moratoria would not necessarily lead to a reclassification of the related loans in Stage 2.
With reference to the forbearance, EBA has further specified that moratoria do not trigger automatic forbearance classification if they are based on the applicable national law, or on industry- or sector-wide private initiatives, if agreed and applied broadly by relevant credit institutions.
Consistently with these recommendations, the Group has not automatically reclassified from Stage 1 to Stage 2 those credit exposures related to customers that have applied for moratoria. However, it is worth mentioning that internal credit processes have been activated, considering both qualitative and quantitative triggers, in order to ensure the proper classification in Stage 2 or Stage 3 (non-performing) of those credit exposures for which the increase in credit risk is unrelated to, or is significantly affected in the long term by, Covid-19 outbreak.

3.3.2 ACCOUNTING TREATMENT OF MORATORIUM MEASURES / PAYMENT HOLIDAYS – 2/6

MAZARS INSIGHTS:

- **Deutsche bank** explain that they comply with the EBA guidelines on "forborn" exposures identification, and also provide a detailed analysis of the accounting implications, by type of moratoria (and for EBA-non-compliant moratoria, separately for Germany, Italy and India)

Measures in context of Covid-19 pandemic

IFRS 9 - Application of EBA guidance regarding Default, Forbearance and IFRS 9 in light of COVID-19 measures

EBA's "Statement on the application of the prudential framework regarding Default, Forbearance and IFRS 9 in light of COVID-19 measures" published on March 25, 2020 states that "institutions are expected to use a degree of judgement and distinguish between borrowers whose credit standing would not be significantly affected by the current situation in the long term, and those who would be unlikely to restore their creditworthiness." The Bank performed portfolio reviews and applied this regulatory guidance to a number of clients mainly in the Investment Bank and Corporate Bank.

EBA is further of the view that "the public and private moratoria, as a response to COVID-19 epidemic, do not have to be automatically classified as forbearance if the moratoria is not borrower specific, based on the applicable national law or on an industry or sector-wide private initiative agreed and applied broadly by relevant credit institutions". Deutsche Bank has introduced this guidance into its internal risk management processes.

For further details with regards to Deutsche Bank's determination of Expected Credit Losses following IFRS 9 accounting rules please refer to Deutsche Bank's Annual Report as of December 31, 2019.

Legislative and non-legislative moratoria and public guarantee schemes in light of COVID-19 pandemic

After the breakout of the COVID-19 pandemic, a number of governments issued programs offering legislative moratoria and guarantee schemes. Non-legislative moratoria programs have been developed to support our clients as well as individual measures have been agreed with our clients.

On April 2, 2020 and June 25, 2020 EBA published its Guidelines on legislative and non-legislative moratoria on loan repayments applied in light of the COVID-19 crisis. These guidelines provide clarity on the treatment of legislative and non-legislative moratoria applied before September 30. 2020 and supplement the EBA Guidelines on the application of the definition of default as regards the treatment of distressed restructuring. Definitions and guidance provided in these guidelines have been considered for accounting and reporting purposes.

The following table provides an overview of newly originated loans and advances subject to a public guarantee scheme in the context of the COVID-19 pandemic, loans and advances subject to COVID-19 related forbearance measures and loans and advances subject to EBA-compliant moratoria as of June 30, 2020. The definition provided in the aforementioned EBA Guidelines have been applied.

Overview of moratoria and guarantee schemes in light of COVID 19 pandemic

				Jun 30, 2020
in € m.	Newly originated loans and advances subject to public guarantee schemes in the context of the COVID-19 crisis[1]	Loans and advances subject to COVID-19-related forbearance measures	Loans and advances subject to EBA-compliant moratoria	Total
Corporate Bank	842	2,115	758	3,715
Investment Bank	10	3,682	222	3,914
Private Bank	319	1,195	7,348	8,861
Capital Release Unit	0	0	427	427
Total	**1,171**	**6,992**	**8,754**	**16,917**

[1] Excluding € 0.2 billion which qualify for derecognition as these loans meet the pass-through criteria for financial instruments under IFRS 9

Newly originated loans and advances subject to a public guarantee scheme include loans and advances mainly guaranteed by KFW (Kreditanstalt für Wiederaufbau), a government-owned promotional. These loans were granted by the bank mainly to European clients in the Corporate Business across all industries. Similar Guarantees were also offered by the Luxembourg Public Investment Bank and by the Ministry of Economic Affairs and Digital Transformation (MINECO) of Spain. Less than 1% of the loan population has an EBA forborne or non-performing status.

COVID-19 related forbearance measures were granted to clients which did not fulfill the EBA compliant moratoria criteria, but the Bank decided on an individual customer basis to amend the conditions of the loan. Individual COVID-19 forbearance measures were granted for borrowers in several business lines and portfolios. For the Investment Bank a significant amount of modifications were granted to Commercial Real Estate Clients, in the Private Bank to the Lending business and in the Corporate Banking to Trade Finance. Upon granting the modifications to the borrowers, the carrying value of the loan was amended by scheduling out the new expected cash flows and discounting at the original effective interest rate. The difference in carrying value was taken as a loss to interest income in the P&L. The amount was not material to the Group.

EBA-compliant moratoria can be divided into legislative moratoria, which are instituted by the Government and non-legislative moratoria granted by financial institutions. The loans and advances subject to EBA-compliant moratoria shown are mainly legislative moratoria instituted by the German, Italian and Indian governments. Under these moratoria, the bank has granted a postponement of interest and/or principal payments depending on the requirements defined by each individual government. The postponement of principal payments led to an extension of the loan maturity date.

The German moratoria was granted to consumer loan agreements and mortgages and only postponed principal payments with interest being waived during the holiday period. Whereas the Italian and Indian moratorias deferred both principal and interest payments to households and financial intermediaries in Italy and to standard term and working capital loans in India. The ability to utilize the German moratoria ended for all borrowers at the end of June 2020, while the Indian moratoria ends at the end of August 2020 and the Italian moratoria ends at the end of September 2020. Overall the majority of loans affected relate to the Private Bank, mainly consumer loans and mortgages. Upon granting the moratoria the carrying value of the loan was amended by scheduling out the new expected cash flows and discounting at the original effective interest rate. The difference in carrying value was taken as a loss to interest income in the P&L. The amount was not material to the Group.

Source: Deutsche Bank, Interim Report as of June 30 2020, p. 38-39

3.3.2 ACCOUNTING TREATMENT OF MORATORIUM MEASURES / PAYMENT HOLIDAYS – 3/6

MAZARS INSIGHTS:

- **BPCE** explains both the implications for the staging for ECL purposes and the impacts relating to the derecognition analysis.
- **Société Générale** disclosed, among other relevant information, the exact amount of the loss recorded in relation to payment relief measures.

NOTE 1 - SIGNIFICANT ACCOUNTING PRINCIPLES

5. COVID-19

COVID-19 SUPPORT MEASURES

In the first half 2020, moratoriums concerned approximately 32 billion euros of outstandings on the Group.

The terms of the moratoriums granted by the Group to its clients varied from country to country. In most 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 granted to corporates and professionals (principal and interests), with interests on the deferral charged only on the principal. In the first half of 2020, these moratoriums affected about 20.2 billion euros of credit outstandings.

Abroad, various cases have been observed, both over the duration of the moratorium (never exceeding 9 months), and over its terms (interest charged or not for the deferment). The relevant credit outstandings amount to approximately 11.8 billion euros.

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) led in some cases (when no interest was charged for deferred interest or when interest was charged only on capital) to recognise a charge into the income statement, representative of the loss of interests and recorded under Interest and similar expense. For the Group as a whole, the loss relating to the moratoriums recorded in the interest margin amounts to approximately 40 million euros.

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, nor into Stage 3. 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.

Source: Société Générale, Consolidated Financial Statements – 30.06.2020, p. 15-16

1.5.1.2 Report des remboursements de crédit (moratoires) et autres restructurations de crédit

Dans le contexte de la crise du Covid-19, le Groupe BPCE a été amené à accorder à ses clients commerçants, professionnels, PME et grandes entreprises, des concessions revêtant différentes formes (suspensions temporaires d'échéances, rééchelonnements, renégociations) afin de les aider à surmonter des difficultés de trésorerie temporaires induites par la crise.

Mesures généralisées

Dès l'annonce du confinement en France, les deux réseaux Banque Populaire et Caisse d'Epargne ont proposé de manière généralisée à leurs clients professionnels et PME appartenant à des secteurs d'activité bien identifiés, le report de leurs échéances de prêts comprenant capital et intérêts pour une durée de six mois. Par la suite, d'autres mesures généralisées ont été accordées à des secteurs d'activité spécifiques tel que, par exemple, un report allant jusqu'à douze mois des échéances de crédit, aux petites et moyennes entreprises des secteurs du tourisme, de l'hôtellerie et de la restauration.

Les conditions de ces moratoires s'inscrivent dans les dispositions de moratoires généraux définies à l'article 10 des lignes directrices de l'EBA (EBA/GL/2020/02) publiées le 2 avril 2020.

En application de ce texte, l'octroi de moratoires de façon large, sans condition d'octroi spécifique, à des contreparties ne présentant pas de difficultés financières avant la situation de crise liée au Covid-19, ne constitue pas à lui seul un indicateur de dégradation significative du risque de crédit. Ainsi, la mise en œuvre d'un moratoire généralisé afin de faire face à une crise de liquidité temporaire dans le contexte de la crise liée au Covid-19 n'entraîne pas de déclassement automatique en Statut 2 (ou Statut 3) des crédits qui étaient classés en Statut 1 avant cette crise.

Mesures individuelles

Par ailleurs, le Groupe BPCE a accompagné de manière individualisée ses clients en leur accordant différentes formes de concessions (moratoires, rééchelonnement ou autre modification des conditions des prêts) dont les conditions ont été fixées sur la base de la situation individuelle du client. Lors de l'octroi d'une telle concession, une analyse spécifique est menée afin d'identifier si la contrepartie présente, à cette date, des indices de difficultés financières. En présence d'un tel indicateur, l'encours est déclassé en Statut 2, ce qui donne lieu à un ajustement de son niveau de provisionnement.

Les moratoires accordés par les établissements du groupe sont généralement facturés au taux d'intérêt initial du crédit, ce qui signifie que les intérêts continuent de courir pendant la durée du moratoire. A l'issue du moratoire, les intérêts sont inclus dans le principal du crédit et remboursés sur la durée résiduelle du crédit (durée allongée en raison du moratoire). Dans ce cas, le moratoire n'implique pas de perte de flux de trésorerie pour la banque. Aucun impact résultat n'est donc à comptabiliser. En pratique, les seuls octrois de moratoires ne donnent pas lieu à décomptabilisation de la créance dans la mesure où ils n'affectent pas significativement la valeur économique nette du crédit.

Au 30 juin 2020, 520 000 crédits accordés par le Groupe BPCE représentant 17 416 millions d'euros (dont 12 576 millions d'euros accordés aux petites et moyennes entreprises) ont fait l'objet de moratoires pour une durée de six mois. La durée du moratoire peut aller jusqu'à douze mois pour les secteurs du tourisme, de l'hôtellerie et de la restauration.

Source: Groupe BPCE, Consolidated IFRS financial statements as at 30 June 2020, p. 15

3.3.2 ACCOUNTING TREATMENT OF MORATORIUM MEASURES / PAYMENT HOLIDAYS – 4/6

MAZARS INSIGHTS:

- **BNP Paribas** explains both the implications for the staging for ECL purposes and the impacts relating to the derecognition analysis.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES APPLIED BY THE GROUP

1.e FINANCIAL ASSETS AND LIABILITIES

Significant increase in credit risk

The granting of moratoria that meet the criteria defined in EBA guidelines published on 2 April 2020, or similar criteria, in the context of the sanitary crisis has not been considered, in isolation, as an indicator of a significant increase in credit risk leading to an automatic transfer in stage 2. Moratoria do not trigger the counting of past-due days as long as the new schedule of payment is respected.

Restructuring of financial assets for financial difficulties

In 2020, in response to the sanitary crisis, several moratoria have been granted to clients. Those moratoria mostly consist in payment suspension of a few months, with interests that may or not continue to accrue during the suspension period. To that extent, the modification is generally considered as not substantial. The associated discount (linked to the absence of interests accruing, or interests accruing at a rate that is lower than the EIR of the loan) is thus accounted for in NBI, subject to the respect of certain criteria[5]. The moratorium is indeed, in such situation, considered as not being granted in response to the borrower encountering financial difficulties, but in response to a temporary liquidity crisis and the credit risk is not considered as having significantly increased.

2.h COST OF RISK

Adaptation of the ECL assessment process to take into account of the specific features of the sanitary crisis:

Besides, the absence of a general maturity extension scheme for individuals, notably in France, led to classify the loans that benefited from accompanying measures not initially provided for under the contract as forborne. However, these measures were not considered as an automatic criterion for transfer to stage 2.

Source: BNP Paribas, Consolidated financial statements – first half 2020, p. 24, 27, 54

3.3.2 ACCOUNTING TREATMENT OF MORATORIUM MEASURES / PAYMENT HOLIDAYS – 5/6

MAZARS INSIGHTS:

- **ING Group** mentions the derecognition analysis being made for the loans subject to moratorium measures, but does not specify whether the non derecognition of such loan is systematic.
- They also indicate that loans which are subject to general payment moratoria are not considered as "forborn" exposures for regulatory and IFRS 9 staging purposes.

1

Credit risk management practices (*)

In many countries, Governments have adopted economic support programs (such as tax advantages, unemployment regulations or guarantees) that we believe will assist ING clients in potential financial difficulty to manage through these extraordinary times. In addition, various initiatives have been taken to grant payment holidays, (guaranteed) new money facilities etc.

Governments in almost all Retail Banking countries have adopted measures providing for payment holidays. As of end of June, approximately 189,000 customers were granted payment holidays.

Source: ING Group, Condensed consolidated interim financial information for the period ended 30 June 2020, p. 11-12

2

The total exposure of loans for which a payment holiday is granted amounts to € 18.1 billion, of which over 55% were for customers located in the Netherlands and Belgium.

The payment holiday schemes offered in the various countries differ in terms of scope, benefit duration and key conditions. Generally these schemes offer a 3 or 6 month suspension of principal payment, and in some instances also of interest payment. The payment holidays are applied to business lending and for mortgages and consumer loans.

The modification of contractual terms of loans subject to payment holiday arrangements does not automatically result in derecognition of the financial assets. Where applicable, the carrying amount of the financial asset has been recalculated as the present value of the renegotiated or modified contractual cash flows, discounted at the original effective interest rate and a gain or loss was recognized.

The various measures by governments and ING to alleviate the impact of Covid-19 also impact the loan classification in terms of forbearance and consequently IFRS 9 staging. In light of this, the EBA has provided guidelines which define eligibility criteria for a payment holiday arrangement offered to a large group of customers to be classified as a "general payment moratorium". The application of such a general payment moratorium should not lead to a forbearance classification. Therefore it should not automatically trigger recognition of lifetime ECL either. ING follows the EBA guidelines and when a payment holiday is provided to a customer as part of a "general payment moratorium", ING does not consider this measure to classify as forbearance.

3.3.2 ACCOUNTING TREATMENT OF MORATORIUM MEASURES / PAYMENT HOLIDAYS – 6/6

MAZARS INSIGHTS:

- **BBVA** provides detailed information on customer support measures (1) and a break-down of exposures subject to restructuring, (2) (including some of those subject to payment holidays measures)

1

The amount of deferment of payments (existing and completed) and the financing granted with public guarantees given at a Group level, as well as the number of customers of both measures, as of June 30, 2020 are as follows:

COVID-19 support programs (Millions of Euros)

	Deferment of payments				Financing with public guarantees			
	Existing	Completed	Total	Number of customers	Total	Number of customers	Total deferment of payments and guarantees	(%) credit investment
Group	29,668	6,590	36,259	3,138,894	13,791	196,186	50,050	11.9%

The amount of deferment of payments (existing and completed) and financing granted with public guarantees given at a Group level, broken down by segment, as of June 30, 2020 are as follows:

COVID-19 support programs (Millions of Euros)

	Deferment of payments			Financing with public guarantees
	Existing	Completed	Total	
Group	29,668	6,590	36,259	13,791
Customers	17,975	3,563	21,538	863
Mortgages	9,318	2,152	11,470	1
SMEs	6,397	792	7,189	7,723
Non-financial corporations	5,006	2,221	7,227	5,126
Other	290	14	304	79

The adoption of deferment of payment measures for bank customers in the different countries in which the Group operates (such as those included in Royal Decree Law 11/2020, as well as in the CECA-AEB agreement to which BBVA has adhered to in Spain) results in the temporary suspension, total or partial, of the contractual obligations with a deferral for a specific period of time. According to IFRS 9, when a deferment of payment does not generate interest collection rights, a temporary loss of value is triggered for the operation, which is calculated as the difference in current value of the original and modified cash flows, both discounted at the effective interest rate of the original operation. The difference is recognized at the original time in the income statement under the heading "Impairment or (reversal) of impairment on financial assets not measured at fair value through profit or loss or net gains by modification" and its counterpart is a correction of the asset value of the loans. From that point on, said correction accrues as net interest income at the original effective interest rate within the period of the deferment of payment. Thus, at the end of the moratorium period, the impact on net attributed profit is neutral.

The quantitative information on refinancing and restructuring operations is presented in the Appendix III "Quantitative information refinancing and restructuring operations and other requirement under Bank of Spain Circular 6/2012".

Source: Group BBVA, Interim Consolidated Report 2020, p. 23 (1), p. 84 (2)

APPENDIX III. Quantitative information on refinancing and restructuring operations and other requirement under Bank of Spain Circular 6/2012

2

a) Quantitative information on refinancing and restructuring operations

The breakdown of refinancing and restructuring operations as of June 30, 2020 and December 31, 2019, is as follows:

June 2020 BALANCE OF FORBEARANCE (Millions of Euros)

	TOTAL						
	Unsecured loans		Secured loans				Accumulated impairment or accumulated losses in fair value due to credit risk
					Maximum amount of secured loans that can be considered		
	Number of operations	Gross carrying amount	Number of operations	Gross carrying amount	Real estate mortgage secured	Rest of secured loans	
Credit institutions	-	-	-	-	-	-	-
General Governments	74	86	63	62	47	-	(10)
Other financial corporations and individual entrepreneurs (financial business)	425	10	32	4	3	-	(5)
Non-financial corporations and individual entrepreneurs (corporate non-financial activities)	65,608	5,437	12,519	3,399	1,854	68	(3,297)
Of which: financing the construction and property (including land)	*617*	*570*	*1,163*	*702*	*388*	*7*	*(468)*
Rest homes (*)	201,229	1,746	75,260	6,024	4,349	84	(1,765)
Total	267,336	7,279	87,874	9,489	6,253	152	(5,078)

	Of which: IMPAIRED						
	Unsecured loans		Secured loans				Accumulated impairment or accumulated losses in fair value due to credit risk
					Maximum amount of secured loans that can be considered		
	Number of operations	Gross carrying amount	Number of operations	Gross carrying amount	Real estate mortgage secured	Rest of secured loans	
Credit institutions	-	-	-	-	-	-	-
General Governments	43	38	29	20	16	-	(7)
Other financial corporations and individual entrepreneurs (financial business)	270	5	18	2	1	-	(4)
Non-financial corporations and individual entrepreneurs (corporate non-financial activities)	39,407	3,072	7,644	2,284	952	47	(2,856)
Of which: financing the construction and property (including land)	*496*	*245*	*707*	*482*	*216*	*-*	*(368)*
Rest homes (*)	100,651	710	34,975	2,879	1,860	12	(1,379)
Total	140,371	3,824	42,666	5,185	2,829	59	(4,246)

(*) Number of operations does not include Garanti BBVA.

Includes mortgage-backed real estate operations with loan to value ratio of greater than 1, and secured operations, other than transactions secured by real estate mortgage regardless of their loan to value ratio.

The accumulated impairment or accumulated losses in fair value due to credit risk correspond to €831 million of collective loss allowances and €4,236 million of specific loss allowances.

3.3.3 IMPACTS ON THE VALUATION OF FINANCIAL INSTRUMENTS (IFRS 13) – 1/5

MAZARS INSIGHTS:

- **Groupe BPCE** quantified the P&L effect COVID-19 had in relation to the valuation of the following instruments:
  - The dividend-related announcements of some entities (and the overall volatility of the financial markets) has impacted the performance of Natixis, the group's investment bank.
  - The valuation of investments in non quoted venture capital funds and real estate funds has been reviewed, with valuation discounts recorded in some cases.
- The overall impact of COVID-19 on the income statement in H1 2020 in relation to the valuation seems to be that of – 647 m€ (supposing the line "other impacts on NBI" also relates exclusively to the valuation of fin. instruments).

1.5 INCIDENCE DE LA CRISE SANITAIRE SUR LES COMPTES

1.5.2.4 Tableau récapitulatif des principaux impacts de la crise Covid-19

en millions d'euros	1er semestre 2020
Produit net bancaire	**-647**
Marquage de dividende sur les produits actions	*-273*
Valorisation des actifs non cotés	*-140*
Autres impacts en PNB (dont CVA)	*-234*
Coût du risque	**-780**
Pertes de crédit attendues	*-553*
Autres impacts	*-227*

Source: Groupe BPCE, Consolidated IFRS financial statements as at 30 June 2020, p. 16-17

1.5 INCIDENCE DE LA CRISE SANITAIRE SUR LES COMPTES

1.5.2 Conséquences sur le recours à des estimations

1.5.2.2 Juste valeur des actifs financiers impactés par la crise sanitaire

Compte tenu des effets de la crise sanitaire du Covid-19 sur les marchés financiers, la valorisation de certains produits a été affectée au cours du 1er semestre 2020 par l'illiquidité des marchés.

Les activités de BGC de Natixis ont ainsi été exposées à des effets de remarquage significatifs de certains paramètres de valorisation comme par exemple la composante « dividende » :

- L'annonce par un certain nombre d'entreprises de la suspension de leurs dividendes, a conduit à un quasi-effacement d'une majorité de dividendes court terme et s'est également traduite dans les valeurs de consensus utilisées pour le remarquage de ce paramètre ;
- En raison d'un environnement de marché stressé ayant généré d'importantes fluctuations, le paramètre « volatilité » a également fait l'objet d'un remarquage sur la totalité des opérations concernées.

Les revenus de Natixis au cours du 1er semestre ont été directement affectés par cette situation (perte de - 273 millions d'euros).

Les participations détenues dans des fonds de capital investissement non cotés sont évaluées suivant les règles fixées par l'IPEV (International Private Equity and Venture Capital Valuation (IPEV) Guidelines), également recommandées par Invest Europe. La valorisation des parts détenues par le Groupe BPCE dans des fonds non cotés (environ 3,3 milliards d'euros) a fait l'objet d'une revue approfondie au 30 juin 2020. En l'absence de valeur liquidative (VL) récente établie par la société de gestion, une décote déterminée sur la base d'une approche sectorielle a été appliquée à la dernière VL disponible.

La valorisation des investissements détenus dans les fonds immobiliers a également été revue au cours du premier semestre et une décote a, le cas échéant, été appliquée pour refléter l'impact de la crise sur la valorisation des actifs sous-jacents.

Ces travaux de valorisation des fonds de capital investissement et des fonds immobiliers se sont traduits par une décote estimée à 140 millions d'euros, présentée au sein des « Gains ou pertes nets des instruments à la juste valeur par résultat ».

3.3.3 IMPACTS ON THE VALUATION OF FINANCIAL INSTRUMENTS (IFRS 13) – 2/5

MAZARS INSIGHTS (CTD.):

- Transfers out of Level 1 may be seen in the table on Level 3 measurements for investments in debt securities.

Note 9 Juste valeur des actifs et passifs financiers

Instruments affectés par la crise financière

Les instruments affectés par la crise financière et figurant à la juste valeur au bilan sont essentiellement détenus par Natixis qui fonde l'évaluation de leur juste valeur sur les modèles décrits ci-dessous :

CDS conclus avec des rehausseurs de crédit (monoline et CDPC)

Depuis le 31 décembre 2015, le modèle de valorisation des réfactions sur opérations avec les monolines conclues sous forme de CDS se rapproche, en terme de méthode, de l'ajustement mis en place pour risque de contrepartie (Credit Valuation Adjustement – CVA). Il tient aussi compte de l'amortissement attendu des expositions et du spread des contreparties implicite des données de marché.

CDO Trups (Trust Preferred Securities)

En 2018, les CDO Trups étaient valorisés à partir d'un modèle de valorisation. Ce dernier était basé sur des projections de flux de trésorerie futurs et de taux de défaut déterminés selon une approche statistique déduisant la probabilité de défaut des établissements bancaires en fonction de leurs ratios financiers. Pour les autres secteurs, les estimations des taux de défaut étaient effectuées en tenant compte des notations actuelles des actifs.

Source: Groupe BPCE, Consolidated IFRS financial statements as at 30 June 2020, p. 85

MAZARS INSIGHTS (CTD.):

- **Groupe BPCE** also indicates that the crisis impacted the valuation of CDS and some CDO:

Note 9 Juste valeur des actifs et passifs financiers

9.1.3 Analyse des transferts entre niveaux de la hiérarchie de juste valeur

Le montant des transferts indiqué dans ce tableau est celui de la dernière valorisation précédant le changement de niveau.

	1er semestre 2020					
De	niveau 1	niveau 1	niveau 2	niveau 2	niveau 3	niveau 3
en millions d'euros **Vers**	niveau 2	niveau 3	niveau 1	niveau 3	niveau 1	niveau 2
ACTIFS FINANCIERS						
Instruments de dettes	**598**		**114**	**60**		**158**
Prêts sur les établissements de crédit et clientèle						115
Titres de dettes	598		114	60		**44**
Instruments de capitaux propres	**190**					
Actions et autres titres de capitaux propres	**190**					
Instruments dérivés	**146**		**59**	**338**		**267**
Dérivés de taux						39
Dérivés actions	81		44			69
Dérivés de change				327		158
Dérivés de crédit				11		**1**
Autres dérivés	65		15			
Actifs financiers à la juste valeur par résultat - Détenus à des fins de transaction [(1)]	**933**		**173**	**398**		**425**
Instruments de dettes	**1**			**29**		**144**
Prêts sur les établissements de crédit et clientèle						40
Titres de dettes	1			29		104
Actifs financiers à la juste valeur par résultat - Non standard	**1**			**29**		**144**
Instruments de dettes	**273**		**811**	**172**		
Prêts sur les établissements de crédit et clientèle						
Titres de dettes	273		811	172		
Instruments de capitaux propres	**2**			**10**		
Actions et autres titres de capitaux propres	2			10		
Actifs financiers à la juste valeur par capitaux propres	**276**		**811**	**182**		

(1) *Hors couverture économique.*

Source: Groupe BPCE, Consolidated IFRS financial statements as at 30 June 2020, p. 95

3.3.3 IMPACTS ON THE VALUATION OF FINANCIAL INSTRUMENTS (IFRS 13) – 3/5

MAZARS INSIGHTS:

- **Deutsche Bank** explained the impact of the market dislocation and increased volatility due to COVID-19 on the valuation of its **derivatives.**
- This group also disclosed the increased sensitivity of Level-3 fair value measurements, as well as transfers into Level-2 of interest rate derivatives.

Movements in assets and liabilities

As of June 30, 2020, the total balance sheet of € 1.4 trillion increased by € 109.6 billion (or 8 %) compared to year-end 2019.

Key drivers for the overall movement were increases in positive and negative market values of derivative financial instruments by € 39.9 billion and € 39.2 billion, respectively, due mainly to moves in interest rates and higher market volatility in the wake of the COVID-19 pandemic.

Valuation techniques

The Group has an established a valuation control framework which governs internal control standards, methodologies, valuation techniques and procedures over the valuation process and fair value measurement. During the first half of 2020, the outbreak of the COVID-19 pandemic broadly impacted the financial markets, notably in March 2020 and April 2020, causing market dislocations and increased market volatility. This resulted an increase in Group's level 3 balances by € 2.0 billion mainly relating to interest rate derivatives. Sensitivity related to the level 3 assets and liabilities increased due to increased dispersion in market data.

Sensitivity analysis of unobservable parameters

Where the value of financial instruments is dependent on unobservable parameter inputs, the precise level for these parameters at the balance sheet date might be drawn from a range of reasonably possible alternatives. In preparing the financial statements, appropriate levels for these unobservable input parameters are chosen so that they are consistent with prevailing market evidence and in line with the Group's approach to valuation control detailed above. Were the Group to have marked the financial instruments concerned using parameter values drawn from the extremes of the ranges of reasonably possible alternatives, then as of June 30, 2020 it could have increased fair value by as much as € 1.9 billion or decreased fair value by as much as € 1.5 billion. As of December 31, 2019 it could have increased fair value by as much as € 1.7 billion or decreased fair value by as much as € 1.2 billion.

The changes in sensitive amounts from December 31, 2019 to June 30, 2020 were an increase in positive fair value movement of € 263 million, and an increase in negative fair value movement of € 392 million. In the same period there was a € 956 million increase in Group level 3 assets and a € 749 million increase in Group level 3 liabilities. During the first half of 2020, the outbreak of the COVID-19 pandemic broadly impacted the financial markets, notably in March 2020 and April 2020, causing market dislocations and increased market volatility. Sensitivity related to the level 3 assets and liabilities increased due to significantly increased dispersion in market data.

Source: Deutsche Bank, Interim Report as of June 30 2020, p. 15, p. 66-71

3.3.3 IMPACTS ON THE VALUATION OF FINANCIAL INSTRUMENTS (IFRS 13) – 4/5

MAZARS INSIGHTS:

- **ING Group** provided a qualitative description of the direct impact COVID-19 and the resulting financial markets' turmoil had on the valuation of its **derivative** instruments. This in turn affected the group's net trading income, especially during the first quarter of 2020.
- The crisis also affected the measurement of that group's non derivative financial instruments.

19 Fair value of assets and liabilities

The Covid-19 pandemic impacted the global financial markets in the first six months of 2020. ING observed large volatility in the market resulting in increased spreads, markets distortion and also illiquidity in some specific markets which has stressed ING's valuation processes and movements in level classifications. The volatility in the market has stabilised in the second quarter of 2020. Financial Assets and Liabilities, including Level 3, continued to be valued using agreed methodologies and ING continued to limit the unobservable input to arrive at the most appropriate Fair Market value.

Source: ING Group, Condensed consolidated interim financial information for the period ended 30 June 2020, p. 46-48, p. 55

15 Valuation results and net trading income

The fair value movements on the derivatives are influenced by changes in the market conditions such as stock prices, interest rates and currency exchange rates. Following the increased concerns about the Covid-19 pandemic, the global financial markets experienced more volatility than usual in the first half of 2020 which had considerable impact on the results. Aided by substantial central bank intervention, markets have recovered during the second quarter of 2020 and volatility has largely returned to pre-pandemic levels.
Derivatives trading results is also impacted by fair value movements arising from changes in credit spreads (CVA and DVA), bid offer spreads, model risk and incremental cost of funding on derivatives (FVA and CollVA). As result of the economic consequences of the Covid-19 pandemic, ING also observed significant widening of the spreads resulting in increased negative fair value changes. As markets stabilised in the second quarter of 2020 and spreads tightened, the fair value changes decreased again.
In the first six months of 2020, Derivatives trading results include EUR -99 million CVA/DVA adjustments on trading derivatives (in the first six months of 2019: EUR -1 million).

'Valuation results and net trading income' include the fair value movements on derivatives (used for both hedge accounting and economically hedging exposures) as well as the changes in the fair value of assets and liabilities included in hedging relationships as hedged items.

3.3.3 IMPACTS ON THE VALUATION OF FINANCIAL INSTRUMENTS (IFRS 13) – 5/5

MAZARS INSIGHTS:

- **Commerzbank** disclosed, among other information, a temporary departure from market prices in Q1 2020 for their investments in CLOs, which was no longer relevant on Q2 as observable market parameters were again available (2).
- No explicit link with COVID-19 is made in the note explaining transfers between Level 1 and Level 2 of the fair value hierarchy, but non availability of quoted market prices was mentioned, triggering a transfer from Level 1 to Level 2 (1).

1 Transfers between Level 1 and Level 2 of fair value measurements

A reclassification to a different level occurs where a financial instrument is reclassified from one level of the 3-level valuation hierarchy to another. This may be caused, for example, by market changes that impact the input factors used to value the financial instrument.

Commerzbank reclassifies items as at the end of the reporting period.

In the first six months of 2020, €0.1bn of debt securities in the HFT category were reclassified from level 2 to level 1, as quoted market prices were available again. In contrast, €0.1bn of debt securities in non-current assets held for sale and disposal groups were reclassified from level 1 to level 2, as no quoted market prices were available.

A number of reclassifications from level 1 to level 2 were carried out in the 2019 financial year, as there were no listed market prices available. These related to €0.5bn in debt securities in the FVOCI category and €0.4bn in debt securities in the HFT category, €0.4bn in debt securities in the mFVPL category, €0.2bn delivery commitments arising from short sales of securities in the HFT category and €0.1bn in delivery commitments arising from short sales of securities liabilities included in disposal groups.

Furthermore €2.6bn of debt securities in the FVOCI category, €0.5bn of debt securities in the HFT category, €0.3bn of debt securities in the mFVPL category, and €0.6bn of delivery commitments arising from short sales of securities in the HFT category were reclassified, as quoted prices were again available. We did not make any other significant reclassifications between level 1 and level 2.

2 Transfers of fair value measurements in and out of Level 3

The changes in financial instruments in the level 3 category

	Financial assets – Fair value OCI
Reclassifications to level 3	4,589
Reclassifications from level 3	–4,847

In the first quarter of 2020, €4.8bn of debt securities, AAA-rated collateralised loan obligations, in the FVOCI category were reclassified from level 2 to level 3. Due to the coronavirus pandemic, various market participants withdrew from the secondary market for collateralised loan obligations in March 2020. In addition, almost no primary market issues were made during this period. The Bank classifies the transactions that have only taken place in isolated instances as non-formalised and accordingly no longer uses the prices of these transactions as input parameters for determining fair value. The valuation technique was changed to a mark-to-model approach, in which key input parameters were based on estimates. These holdings were reclassified back to level 2 in the second quarter of 2020, as observable market parameters were again available.

Source: Commerzbank, Interim report as at 30 June 2020, p. 76-79

3.3.4 OTHER CONSIDERATIONS WITH REGARDS TO FINANCIAL INSTRUMENTS

MAZARS INSIGHTS:

- **Société Générale** have disclosed the impact of COVID-19 (or rather the absence of impact) on their hedging relationships.

NOTE 3.2 - FINANCIAL DERIVATIVES

2. HEDGING DERIVATIVES

According to the transitional provisions of IFRS 9, the Group made the choice to maintain the IAS 39 provisions related to hedge accounting. Consequently, equity instruments held (equities and similar securities) are not eligible for hedge accounting regardless of their accounting classification.

In the context of Covid-19 crisis, the Group has not observed any ineffectiveness or disappearance of hedged items that could lead to the termination of its hedging relationships.

Source: Société Générale, Consolidated Financial Statements – 30.06.2020, p. 16

MAZARS INSIGHTS:

- Two banks indicated impairment losses on their AFS equity investments held by their insurance activities that continue to apply standard IAS 39 (rather than IFRS 9).
- **Société Générale** explicitly linked these impairments to the economic crisis generated by COVID-19.

NOTE 4.3 - INSURANCE ACTIVITIES

2. INVESTMENTS OF THE INSURANCE ACTIVITIES

CHANGES IN AVAILABLE-FOR-SALE FINANCIAL ASSETS

The Covid-19 sanitary crisis evolved into an economic crisis which led the Group to recognise losses on available-for-sale financial assets amounting to EUR 161 million over the 1st half of 2020.

These impairments recognised in the income statement among Net income of insurance activities are mainly affecting UCITS shares and stocks that are in a prolonged capital loss situation; they are mostly compensated in the income statement by reversals on the provisions for deferred profit-sharing as at 30 June 2020.

No significant counterparty risk has been identified on debt instruments as at 30 June 2020.

Source: Société Générale, Consolidated Financial Statements – 30.06.2020, p. 57

3.4 OTHER FINANCIAL REPORTING-RELATED EXTRACTS

3.4.1 IMPAIRMENT OF GOODWILL AND OTHER NON-FINANCIAL ASSETS (1/7)

Goodwill

Goodwill is allocated to groups of cash generating units (CGUs) as follows:

Goodwill allocation to group of CGUs

Group of CGUs	Method used for recoverable amount	Discount rate	Long term growth rate	Goodwill 30 June 2020	Goodwill 31 December 2019
Retail Netherlands	Values in use	8.46%	0.00%	30	30
Retail Belgium	Values in use	9.54%	0.00%		50
Retail Germany	Values in use	8.43%	0.00%	349	349
Retail Growth Markets[1]	Values in use	13.59%	3.61%	182	209
Wholesale Banking[1]	Values in use	9.38%	0.85%		268
				562	**907**

1 Goodwill related to Growth Countries is allocated across two groups of CGUs, EUR 182 million to Retail Growth Markets and EUR 0 million to Wholesale Banking (31 December 2019: EUR 209 million to Retail Growth Markets and EUR 61 million to Wholesale Banking).

Covid-19 has resulted in adverse changes in the market and economic environment. Due to the impact of the significant deterioration in the economic environment on the cash flow outlook of our businesses, we completed a goodwill impairment review across ING Group in the second quarter of 2020.

This review resulted in the recognition of goodwill impairments on the CGU Retail Belgium of EUR 50 million (of which EUR 43 million Retail Belgium segment and EUR 8 million Corporate Line) and on the CGU Wholesale Banking of EUR 260 million (fully reported in the Wholesale Banking segment).

For both CGUs the impairment resulted from the negative developments in the macro-economic outlook in the context of the Covid-19 pandemic. In addition, the applicable discount rate is also affected by the deteriorated economic and risk environment. The discount rate used to estimate the value in use of the CGU Belgium as at 30 June 2020 was 9.54 % (31 December 2019: 6.94 %). The discount rate used to estimate the value in use of CGU Wholesale Banking, which is based on the weighted average of the discount rates of various local businesses as Wholesale Banking is a global business line, was at 30 June 9.38% (31 December 2019: 7.29%).

For each of the other group of CGU's the recoverable amount exceeds the carrying value of the CGUs for 2020 and 2019 and therefore no impairment is required.

Methodology

Several methodologies are applied to arrive at the best estimate of the recoverable amount. In line with IFRS, the recoverable amount is determined as the higher of the fair value less costs of dispos and Value in Use (VIU). The VIU calculation is based on a Dividend Discount model using three year management approved plans, updated for the expected impact of Covid-19. When estimating the VIU of a CGU, local conditions and requirements determine the capital requirements, discount rates, and terminal growth rates. These local conditions and capital requirements determine the ability to upstream excess capital and profits to ING Group. The discount rate calculation includes other inputs such as equity market premium, country risk premium, and long term inflation which are based on market sources and management's judgement. The long term growth rate for EU-countries is based on long-term risk-free rate by reference to the yield of a composite index consisting of Euro generic government bonds, with a maturity of 30 years. For other countries, the growth rate includes long term inflation rate obtained from market sources.

Sensitivity of key assumptions

Key assumptions in the goodwill impairment test model are the projected locally available cash flows (based on local capital requirements and projected profits), discount rates (cost of equity), and long term growth rates.

The recoverable amounts of the unimpaired CGU's are sensitive to the above key assumptions. A decrease in the available cash flow of 10%, an increase in the discount rate of 1 percent point or a reduction of future growth rate to zero are considered reasonably possible changes in key assumptions. If the aforementioned changes occur to the above key assumptions holding the other key assumptions constant, goodwill of the remaining CGUs will continue to be recoverable and no impairment will occur.

Source: ING Group, Condensed consolidated interim financial information for the period ended 30 June 2020, p. 41-42

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3.4.1 IMPAIRMENT OF GOODWILL AND OTHER NON-FINANCIAL ASSETS (2/7)

MAZARS INSIGHTS:

- **BBVA** has recorded very significant goodwill impairment losses, for its CGU in the United States
- **BBVA** provides detailed impairment testing sensitivity analysis (actually, these are separate analyses by Geographical region / CGU)

17. Intangible assets

17.1 Goodwill

The breakdown of the balance under this heading in the accompanying consolidated balance sheets, according to the cash-generating unit (hereinafter "CGU") to which goodwill has been allocated, is as follows:

Goodwill. Breakdown by CGU and changes of the period (Millions of Euros)

	The United States	Turkey	Mexico	Colombia	Chile	Other	Total
Balance as of December 31, 2018	5,066	382	519	161	29	23	6,180
Additions	-	-	-	-	-	-	-
Exchange difference	98	(36)	31	3	(2)	(1)	93
Impairment	(1,318)	-	-	-	-	-	(1,318)
Other	-	-	-	-	-	-	-
Balance as of December 31, 2019	3,846	346	550	164	27	22	4,955
Additions	-	-	-	-	-	-	-
Exchange difference	58	(45)	(100)	(21)	(2)	(1)	(111)
Impairment	(2,084)	-	-	-	-	-	(2,084)
Other	-	-	-	-	-	-	-
Balance as of June 30, 2020	1,820	301	450	143	25	21	2,760

Impairment test

As mentioned in Note 2.2.8 of the consolidated Financial Statements of the year 2019, the CGUs to which goodwill has been allocated, are periodically tested for impairment by including the allocated goodwill in their carrying amount. This analysis is performed at least annually and whenever there is any indication of impairment.

The BBVA Group performs estimations on the recoverable amount of certain CGU´s by calculating the value in use through the discounted value of future cash flows method.

The main hypotheses used for the value in use calculation are the following:

- The forecast cash flows, including net interest margin, estimated by the Group's management, and based on the latest available financial statements budgets for the next 3 to 5 years, considering the macroeconomic variables of each CGU, regarding the existing balance structure as well as macroeconomic variables such as the evolution of interest rates and the CPI of the geography where the CGU is located, among others.
- The constant growth rate for extrapolating cash flows, starting in the third or fifth year, beyond the period covered by the budgets or forecasts.
- The discount rate on future cash flows, which coincides with the cost of capital assigned to each CGU, and which consists of a risk-free rate plus a premium that reflects the inherent risk of each of the businesses evaluated.

The focus used by the Group's management to determine the values of the assumptions is based both on its projections and past experience. These values are verified and use external sources of information, wherever possible. Additionally, the valuations of the goodwill of the CGUs of the United States and Turkey have been reviewed by independent experts (not the Group's external auditors) as of March 31, 2020 and December 31, 2019. However, certain changes to the valuation assumptions used could cause differences in the impairment test result.

As of December 31, 2019, the Group estimated impairment losses in the United States CGU of €1,318 million, which was mainly as a result of the negative evolution of interest rates, especially in the second half of the year, which accompanied by the slowdown of the economy caused the expected evolution of results below the previous estimation. This recognition did not affect the tangible book value nor the liquidity nor the capital of the BBVA Group.

Source: Group BBVA, Interim Consolidated Report 2020, p. 41-43

As of March 31, 2020, the Group identified an indicator of impairment of goodwill in the CGU and as a result of the goodwill impairment test, the Group estimated impairment in the United States CGU, of €2,084 million (see Note 44), which was mainly due to the negative impact of the update of the macroeconomic scenario following the COVID-19 pandemic (see Note 1.5) and the expected evolution of interest rates. This recognition did not affect the tangible book value nor the liquidity nor the capital of the BBVA Group.

As of June 30, 2020, as a result of the CGU´s assessment, the Group concluded there is no evidence of further indicators of impairment losses that requires recognizing significant additional impairment losses in any of the CGUs where goodwill that the Group has recognized in the consolidated balance sheet is allocated.

Goodwill - The United States CGU

The Group's most significant goodwill corresponds to the CGU in the United States, the main significant assumptions used in the impairment test as of March 31, 2020 of this mentioned CGU, were:

Impairment test assumptions CGU goodwill in the United States

	March 2020	December 2019
Discount rate	10.3%	10.0%
Growth rate	3.0%	3.5%

In accordance with paragraph 33.c of IAS 36, as of March 31, 2020, the Group used a growth rate of 3.0% based on the real GDP growth rate of the United States, the expected inflation and the potential growth of the banking sector in the United States. This 3.0% rate is lower than the historical average of the past 30 years of the nominal GDP rate of the United States and lower than the real GDP growth forecasted by the IMF.

The assumptions with a greater relative weight and whose volatility could have a greater impact in determining the present value of the cash flows starting on the fifth year are the discount rate and the growth rate. Below is shown the increased (or decreased) amount of the CGU recoverable amount as a result of a reasonable variation (in basis points) of each of the key assumptions as of March 31, 2020:

Sensitivity analysis for main assumptions - The United States (Millions of Euros)

	Increase of 50 basis points (*)	Decrease of 50 basis points (*)
Discount rate	(755)	869
Growth rate	270	(235)

(*) Based on historical changes, the use of 50 basis points to calculate the sensitivity analysis would be a reasonable variation with respect to the observed variations over the last five years.

Goodwill - Turkey CGU

The main significant assumptions used in the impairment test as of March 31, 2020 of the CGU of Turkey, were:

Impairment test assumptions CGU goodwill in Turkey

	March 2020	December 2019
Discount rate	18.1%	17.4%
Growth rate	7.0%	7.0%

Given the potential growth of the sector in Turkey, in accordance with paragraph 33.c of IAS 36, as of March 31, 2020 and December 31, 2019, the Group used a growth rate of 7.0% based on the real GDP growth rate of Turkey and expected inflation.

The assumptions with a greater relative weight and whose volatility could affect more in determining the present value of the cash flows starting on the fifth year are the discount rate and the growth rate. Below is shown the increased (or decreased) amount of the recoverable amount as a result of a reasonable variation (in basis points) of each of the key assumptions as of March 31, 2020:

Sensitivity analysis for main assumptions - Turkey (Millions of Euros)

	Impact of an increase of 50 basis points	Impact of a decrease of 50 basis points
Discount rate	(166)	183
Growth rate	23	(21)

Goodwill - Other CGUs

The sensitivity analysis on the main hypotheses carried out for the rest of the CGUs of the Group indicate that their value in use would continue to exceed their book value.

3.4.1 IMPAIRMENT OF GOODWILL AND OTHER NON-FINANCIAL ASSETS (3/7)

NOTE 1 - SIGNIFICANT ACCOUNTING PRINCIPLES

5. COVID-19

ASSETS IMPAIRMENT TESTS

These tests focused mainly on goodwill and deferred tax assets.

GOODWILL

Goodwill is to be subject to an impairment test whenever there is any indication that its value may have diminished, and at least once a year. While the economic crisis related to the Covid-19 does not in itself constitute an evidence of impairment, its negative impacts on the Group's results and budget projections justify the completion of tests on all the Cash Generating Units (CGUs) when preparing the half-yearly financial statements as at 30 June 2020.

As at 30 June 2020, the tests carried out highlighted that the recoverable value of the CGU Global Markets and Investors Services was below its book value, resulting in the recognition of an irreversible impairment charge of 684 million euros in the consolidated income statement under Goodwill Value Changes.

Sensitivity tests performed and showed that weighting the SG Base scenario at 65% (instead of 70%) and the SG Prolonged scenario at 35% (instead of 30%) would not result in additional impairment.

The modalities of these tests (methodology and assumptions used in connection with the macroeconomic scenarios mentioned above) are detailed in Note 2.2.

DEFERRED TAX ASSETS

Deferred tax assets are recorded only if the relevant tax entity (or tax group) is likely to recover these assets within a set time. These deductible temporary differences or tax loss carryforwards can also be used against future taxable profit. Tax loss carryforwards are subject to an annual review based on the realistic projection of the tax income or expense of the relevant tax entities. After completion of these tests, the carrying value of deferred tax assets already recognised in the balance sheet is reduced whenever a risk of total or partial non-recovery occurs.

As at 30 June 2020, the Group carried out a specific review of tax loss carryforwards by including the consequences and uncertainties generated by the Covid-19 crisis into the projections of the taxable income of the relevant tax entities. Following this review, deferred tax assets have been reduced and a loss has been recorded under Income tax for an amount of 650 million euros (see Note 6).

Sensitivity tests have were performed and showed that the weighting of the SG Base scenario at 65% (instead of 70%) and of the SG Prolonged scenario at 35% (instead of 30%) would result in an additional decrease in deferred tax assets of 56 million euros.

Source: Société Générale, Consolidated Fin. Statements – 30.06.2020, p. 17

NOTE 2.2 - GOODWILL

ANNUAL IMPAIRMENT TEST OF CGU

Goodwills are subject to an impairment test as soon as there is any indication of impairment and at least once a year. The Covid-19 sanitary crisis alone is not an indication of impairment, however, its negative consequences on the Group's results and financial projections justify the performance of tests on all CGUs as part of the preparation of the half-yearly financial statements as at 30 June 2020.

A CGU is defined as the smallest identifiable group of assets that generates cash inflows, which are largely independent of the cash inflows from the Group's other assets or groups of assets. Impairment tests consist into assessing the recoverable value of each CGU and comparing it with its carrying value. An impairment loss is recorded in the income statement if the carrying value of a CGU, including goodwill, exceeds its recoverable value. This impairment loss is allocated to reduce irreversibly the carrying amount of the goodwill.

The recoverable amount of a CGU is calculated using the discounted cash flow (DCF) method applied to the entire CGU.

As at 31 December 2019, cash flows used in this calculation are distributable dividends generated by all the entities included in the CGU, taking into account the Group targeted equity allocated to each CGU, determined on a five-year period with the prospective four-year budgets extrapolated for the fifth year, the latter to a "normative" year used to calculate the terminal value.

As at 30 June 2020, the Group adjusted the implementation modalities of the discounted dividend method, moving towards an approach integrating two macroeconomic scenarios, more relevant in the context of strong uncertainties linked to the Covid-19 crisis. The two scenarios selected, the central scenario (SG Base) and a more pessimistic scenario of a prolonged sanitary crisis (SG Prolonged), were established by the Group's economists; their underlying assumptions are presented in Note 1. The key principles of the approach adopted this semester to assess the recoverable amount of the CGUs are as follows:

Source: Société Générale, Consolidated Financial Statements – 30.06.2020, p. 20

Note that more details on the assumptions of the recoverable amount calculations are provided on p. 20-22.

Note also that the number and weightings of scenarios used for goodwill impairment testing differs from those used for ECL calculations, as per p. 15 of the interim financial statements.

3.4.1 IMPAIRMENT OF GOODWILL AND OTHER NON-FINANCIAL ASSETS (4/7)

11 Goodwill and intangible assets

	Footnotes	30 Jun 2020 $m	31 Dec 2019 $m
Goodwill		**5,482**	5,590
Present value of in-force long-term insurance business		**9,379**	8,945
Other intangible assets	1	**4,577**	5,628
At the end of the period		**19,438**	20,163

1 *Included within other intangible assets is capitalised software with a net carrying amount of $3,861m (31 December 2019: $4,829m).*

We considered the pervasive macroeconomic deterioration caused by the outbreak of Covid-19, along with the impact on forecast profitability in some businesses, to be an indicator of goodwill and capitalised software impairment. As a result, interim impairment tests were performed at 30 June 2020.

Goodwill

Impairment test at 30 June 2020

An interim impairment test was performed by comparing the estimated recoverable amount of a cash generating unit ('CGU') carrying goodwill, determined by a VIU calculation, with its carrying amount. At 30 June 2020, the goodwill allocated to Middle East and North Africa – WPB ($41m) was fully impaired.

As disclosed on page 290 of our *Annual Report and Accounts 2019*, a reasonable change in a single key assumption would not result in impairment of goodwill in our former Europe – RBWM CGU. Though taken together, a combination of reasonable changes in forecast cash flows (30% decrease) and an increase in the discount rate (by 100bps) could result in a recoverable amount that is lower than the CGU's carrying amount. The sensitivity profile of our new Europe – WPB CGU at 30 June 2020 is the same. Details regarding our change in global businesses are set out in Note 5.

No other CGUs are sensitive to changes in key assumptions that would result in impairment.

Other intangible assets

Impairment test at 30 June 2020

An impairment test was performed at 30 June 2020 by comparing the net carrying amount of capitalised software assets with their recoverable amounts. Recoverable amounts were determined by calculating an estimated VIU or fair value, as appropriate, for each underlying business that carries software assets. Our cash flow forecasts have been updated for changes in the external outlook, although current economic and geopolitical risks increase the inherent estimation uncertainty.

We recognised $1.2bn of capitalised software impairment related principally to businesses within HSBC Bank plc, our non-ring-fenced bank in Europe. This impairment reflected underperformance and deterioration in the future forecasts of these businesses, substantially relating to prior periods.

Source: HSBC Holdings plc Interim Report 2020, p. 114

Note that more details on the assumptions of value-in-use calculation for other intangible assets a are provided in HSBC interim report.

3.4.1 IMPAIRMENT OF GOODWILL AND OTHER NON-FINANCIAL ASSETS (5/7)

6.9 Goodwill

Goodwill is tested for impairment whenever there is objective evidence of a loss of value and at least once a year. Although the health and economic crisis linked to COVID is not in itself an indication of an impairment loss, the economic consequences thereof impact the level of profitability of the financial sector, particularly banking. During the second quarter of 2020, Crédit Agricole S.A. conducted impairment tests on the goodwill recorded on its balance sheet. These tests are based on assessing the useful value of the CGU to which they are attached. Determining the value in use was based on discounting the CGUs' estimated future cash flows calculated from new activities forecasts over a period over three years (2020-2022) developed for Group management purposes, extrapolated over a fourth and fifth year in order to merge towards a standardised final year incorporating all the catch-up effects expected post-COVID. For the International Retail Banking – Italy CGU which is very sensitive to the short-rate environment, the activity forecast was extrapolated over an additional year so as to better understand the convergence towards this normalised final year.

During the second quarter of 2020, Crédit Agricole Group worked on several economic scenarios, selecting the "central" scenario for its impairment tests which best reflects management's views. This scenario resulted in a review of the financial forecasts for CGUs in relation to those used when conducting impairment tests on goodwill in late 2019. This "V-shaped" scenario incorporates the sharp contraction in supply and demand between mid-March and mid-May 2020 when lockdown was in place. This contraction would be reflected by a sharp fall in gross domestic product in the second quarter of 2020, intensifying that of the first quarter. This would be followed by a significant upturn in the third quarter of 2020 linked to a rapid recovery in the consumption of goods, and a gradual recovery of the consumption of services, helped in particular by the rapid, unprecedented response of regulators and auditors (adoption of a share buy-back programme, authorisation for banks to make full use of equity and liquidity buffers, early easing of Pillar 2 capital composition requirements, extension of the scope of eligible assets under the corporate bond purchasing programme, etc.). This resumption of activity would then continue at a more gradual pace. The deterioration of production capacity would remain limited owing to support measures helping to protect jobs and household income. The scenario is based on a 2022 GDP level that is slightly higher than that of 2019.

For those CGUs showing a relatively limited difference between the value in use and consolidated value as at 31 December 2019, additional work was undertaken in connection with making up the financial statements as at 30 June 2020. These CGUs are French Retail Banking – LCL, International Retail Banking – Italy, and Consumer Finance (excluding Agos). For the other CGUs, the positive difference between the value in use and the consolidated value as at 31 December 2019 is such that the Group considers that an update to impairment tests would not have led to the need for depreciation.

This work consisted of reviewing the value of goodwill based on revised financial forecasts and on conducting sensitivity analyses, the results of which are presented below. The methodology remains unchanged compared with the work undertaken as at 31 December 2019, with the exception of the recognition of a number of regulatory changes: the removal of a number of counter-cyclical buffers for the term of the plan (including the French buffer, following the decision of the High Council for Financial Stability (Haut Conseil de Stabilité Financière) of 18 June 2020) and the early application of Article 104a of CRD 5 authorising the hedging of Pillar 2 requirements (P2R) with 75% of Tier 1 capital, thus reducing the CET1 requirement by 66 basis points in both P2R and P2G for Crédit Agricole S.A., French Retail Banking – LCL, and Consumer Finance (excluding Agos) and by 77 basis points for the International Retail Banking – Italy CGU. The valuation parameters, in particular, the discount rates, were updated as at 30 June 2020.

Therefore the calculation parameters are as follows:

- Discount rate: 7.8% for French Retail Banking CGU – LCL, 8.2% for the Consumer Finance CGU (excluding Agos) and 9.0% for the International Retail Banking – Italy CGU,
- Allocation of CET1 equity capital: 8.85% for the French Retail Banking – LCL and Consumer Finance CGUs (excluding Agos), and 8.99% for the International Retail Banking – Italy CGU,
- Perpetual growth rate of cash flows: kept at 2% for the 3 CGUs.

Following this work, Crédit Agricole S.A. did not see any evidence to suggest any depreciation in goodwill as at 30 June 2020.

Sensitivity tests were conducted on goodwill Group share with changes in the main valuation parameters. These tests show that the French Retail Banking – LCL CGU, the International Retail Banking – Italy CGU and the Consumer Finance (excluding Agos) CGU affected by the consequences of the health crisis and the persistent low interest-rate environment, are sensitive to deteriorations in the model's parameters. These tests showed the following results:

- With regard to financial parameters:
  - a change of +50 basis points in discount rates would result in a negative difference between the value in use and the carrying amount of approximately €340 million for the French Retail Banking – LCL CGU and approximately €370 million for the International Retail Banking – Italy CGU, and approximately €30 million for the Consumer Finance (excluding Agos) CGU.
  - a change of +100 basis points in the level of CET1 equity allocated to CGUs would result in a negative difference of approximately €270 million for the International Retail Banking – Italy CGU. The French Retail Banking – LCL and Consumer Finance (excluding Agos) CGUs would retain positive differences between the value in use and the consolidated value.
- With regard to operational parameters, they show that only the International Retail Banking – Italy and Consumer Finance (excluding Agos) CGUs are sensitive to the deterioration in operational parameters we have simulated:
  - For the International retail banking – Italy CGU, both the scenario of a +100 bp variation in the cost/income ratio [1] in the final forecast year, and the scenario of a +10% increase in the cost of risk for that year would result in a negative difference between the value in use and the consolidated value of some €170 million.
  - For the Consumer Finance (excluding Agos) CGU, the +10% increase in the cost of risk in the final forecast year would result in a negative difference of approximately €150 million between the value in use and the consolidated value. Assuming a +100 bp increase in the cost/income ratio in the final forecast year, the value in use would remain higher than the consolidated value.

Sensitivity of CGU values in use to the main valuation parameters

	Sensitivity to capital allocated	Sensitivity to discount rates		Sensitivity to cost of risk in the final year		Sensitivity to the cost/income ratio in the final year	
At 30 June 2020	**+ 100 pb**	**- 50 pb**	**+ 50 pb**	**- 10%**	**+ 10%**	**- 100 pb**	**+ 100 pb**
Frensh retail banking - LCL	(2,5 %)	+ 8,3 %	(6,9 %)	+ 2,9 %	(2,9 %)	+ 3,3 %	(3,3 %)
International retail banking - Italy	(4,4 %)	+ 7,3 %	(6,3 %)	+ 2,4 %	(2,4 %)	+ 2,4 %	(2,4 %)
Consumer credit (excluding Agos)	(6,4 %)	+ 9,8 %	(8,3 %)	+ 13,5 %	(13,5 %)	+ 5,5 %	(5,5 %)

(1) *At constant revenues*

Source: Crédit Agricole, Condensed interim consolidated financial statements as at 30 June 2020, p. 86-87

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3.4.1 IMPAIRMENT OF GOODWILL AND OTHER NON-FINANCIAL ASSETS (6/7)

3.2 ÉCARTS D'ACQUISITION

3.2.2 Tests de dépréciation des des écarts d'acquisition

Les écarts d'acquisition doivent faire l'objet d'un test de dépréciation dès l'apparition d'indices de perte de valeur et au minimum une fois par an. La situation d'urgence sanitaire (Covid-19) du 1er semestre 2020 ne constitue pas, à elle seule, un indice de perte de valeur.

Ses conséquences négatives sur les résultats et les projections budgétaires du groupe justifient cependant la réalisation de tests sur l'ensemble des Unités Génératrices de Trésorerie (UGT) dans le cadre de la préparation des états financiers semestriels au 30 juin 2020.

Les tests de dépréciation consistent à évaluer la valeur recouvrable de chaque UGT et à la comparer à sa valeur comptable. Une perte de valeur est constatée au compte de résultat si la valeur comptable d'une UGT, comprenant les écarts d'acquisition qui lui sont affectés, est supérieure à sa valeur recouvrable.

Dans le contexte de la crise sanitaire, des tests de dépréciation ont été réalisés sur l'ensemble des écarts d'acquisition. La détermination des valeurs d'utilité a reposé principalement sur l'actualisation de l'estimation des flux futurs des UGT tels qu'ils résultent des dernières prévisions de résultat des métiers établis à l'aune de la crise au 1er semestre 2020.

Hypothèses clés utilisées pour déterminer la valeur recouvrable des UGT de la « Banque de Proximité », « Autres réseaux » et « Solutions et Expertises Financières »

L'approche selon la méthode des flux de trésorerie actualisés (dividendes distribuables par les entités composant l'UGT (« DDM »)) a été utilisée pour l'UGT « Oney Bank » et l'UGT « Banques Régionales ». L'approche par DCF (Discounted Cash Flows, actualisation des flux de trésorerie) a été retenue pour l'UGT « Solutions et Expertises Financières » (SEF). Le modèle DDM permet la construction d'une chronique théorique de flux excédentaires distribuables en totalité, tout en intégrant des contraintes réglementaires.

Les hypothèses suivantes ont été retenues :

- Taux de croissance à long terme de 2 % pour l'ensemble des banques et filiales
- Taux d'actualisation de 9,5 % pour Oney Bank, de 9,5 % pour le pôle SEF et 7,5 % pour les Banques Régionales.

Ces taux d'actualisation ont été déterminés en prenant en compte :

- Pour UGT Oney Bank, sur la base d'une moyenne hebdomadaire du taux de rendement de l'OAT 10 ans sur une profondeur de 8 ans, auquel s'ajoute une prime de risque calculée sur la base d'un échantillon de banques universelles cotées.
- Pour l'UGT SEF, sur la base d'une moyenne hebdomadaire du taux de rendement de l'OAT 10 ans sur une profondeur de 8 ans, auquel s'ajoute une prime de risque calculée sur la base d'un échantillon de banques universelles cotées.
- Pour l'UGT Banques Régionales, sur la base d'un taux sans risque (OAT 10 ans) sur une profondeur de 8 ans, auquel s'ajoute une prime de risque calculée sur la base d'un échantillon de banques européennes cotées exerçant une activité bancaire similaire et en tenant compte des spécificités de ces établissements.

Ces tests n'ont pas conduit à comptabiliser de dépréciation au 30 juin 2020.

Hypothèses clés utilisées pour déterminer la valeur recouvrable des autres UGT

…

Une augmentation de 30 points de base des taux d'actualisation (hypothèse basée sur la variabilité annuelle historique observée sur un an à partir des données historiques 2012-2019) associée à une diminution de 50 points de base des taux de croissance à l'infini contribuerait à minorer la valeur d'utilité des UGT de :

- - 9 % pour l'UGT « Gestion d'actifs et de fortune » ;
- - 14 % pour l'UGT « Banque de Grande Clientèle » ;
- - 7 % pour l'UGT « Assurances » ;
- - 10 % pour l'UGT « Paiements ».

Sans conséquence sur les conclusions du test de dépréciation.

De même, la sensibilité des flux futurs des plans d'affaires des métiers à la variation des hypothèses clés n'affecte pas de façon significative la valeur recouvrable des UGT :

- Pour la « Gestion d'actifs et de fortune », une baisse de 10 % des marchés « actions » (baisse uniforme sur l'ensemble des années) engendrerait un impact négatif limité à -5 % sur la valeur recouvrable de l'UGT et n'amènerait pas à constater de dépréciation. Par ailleurs, au titre de la sensibilité, un scénario stressé des plans d'affaires, portant par exemple sur la contribution des affiliés, n'entrainerait pas de dépréciation ;
- Pour la « Banque de Grande Clientèle », la sensibilité au dollar ou au renchérissement du coût de liquidité aurait un impact limité sur le produit net bancaire et n'amènerait pas à constater de dépréciation ;
- Pour l'UGT « Assurances » :
  - Le facteur de sensibilité principal pour l'assurance-vie est l'évolution des taux d'intérêt et des marchés, mais différentes mesures sont mises en œuvre pour en atténuer les impacts (diversification des placements, réserves, couverture actions ...). De ce fait, l'impact sur le compte de résultat est limité et n'affecterait pas significativement la valorisation de l'UGT ;
  - Concernant l'assurance non vie, le vecteur principal de sensibilité est le niveau de sinistralité, mesuré notamment à travers le ratio combiné. Ce dernier est fixé à un niveau inférieur à 94% dans le cadre du plan stratégique New Dimension. Une dégradation d'un point de ce ratio sur l'ensemble des années conduirait à une baisse limitée de 3% de la valeur de l'UGT, sans incidence en termes de dépréciation ;
- Pour l'UGT « Paiements », en termes d'activité, le business model du pôle est diversifié avec d'une part un métier historique de paiements pour les réseaux du Groupe BPCE qui montre une grande récurrence de volume d'activité à travers les années (et une forte dynamique des paiements électroniques), et, d'autre part, un portefeuille de Fintechs dont les produits offerts à la clientèle Groupe et externe sont multiples (titres dématérialisés, merchant solutions, e-commerce, solutions pour les comités d'entreprise…). Ce business model induit une plus faible volatilité dans l'évolution des résultats.

Source: Groupe BPCE, Consolidated IFRS financial statements as at 30 June 2020, p. 29-30 (NB: details on key assumptions of the impairment test are not reproduced on this page)

3.4.1 IMPAIRMENT OF GOODWILL AND OTHER NON-FINANCIAL ASSETS (7/7)

4.1 Goodwill

The following table shows the updated sensitivity to changes in the value of parameters used in the discounted cash flow method (DCF).

In millions of euros	BancWest
Cost of capital	**9.3%**
Adverse change (+10 basis points)	(125)
Positive change (- 10 basis points)	129
Cost/income ratio	**61.5%**
Adverse change (+ 1 %)	(224)
Positive change (-1 %)	224
Cost of risk	**(142)**
Adverse change (+ 5 %)	(54)
Positive change (- 5 %)	54
Growth rate to perpetuity	**3.0%**
Adverse change (-50 basis points)	(233)
Positive change (+50 basis points)	273

Source: BNP Paribas, Consolidated financial statements – first half 2020, p. 85

Notes to the balance sheet (non-financial instruments)

(30) Intangible assets

Sensitivities

A sensitivity analysis was also performed to further validate the recoverability of goodwill. It identified no potential impairment requirement for the Private and Small-Business Customers CGU. Varying the risk-adjusted interest rate (after tax) by – 25 and + 25 basis points (bps) for the detailed planning phase produced the following ratios of excess cover to carrying amount for the Private and Small-Business Customers CGU; cover was not deficient at any point in the reporting year. Any non-controlling interests were taken into account when determining the sensitivity.

		Private and Small Business Customers	
		30.6.2020	31.12.2019
Baseline scenario[1]		10.1%	36.1%
Sensitivity analysis[1]	Risk- adjusted interest rate – 5 bps (advantageous)	14.5%	40.4%
	Risk- adjusted interest rate + 25 bps (disadvantageous)	5.9%	32.0%
Sensitivity analysis[1]	Growth rate + 25 bps (advantageous)	11.5%	38.3%
	Growth rate – 25 bps (disadvantageous	8.7%	33.9%

[1] Positive percent values indicate excess cover; negative percent values indicate deficient cover.

Source: Commerzbank, Interim report as at 30 June 2020, p. 92

NOTE 2.2 - GOODWILL

Sensitivity tests are carried out to measure the impact on each CGU's recoverable value of variations in certain assumptions.

As at 30 June 2020, given the changes in the approach for calculating the recoverable amount, now based on an estimate of future cash flows according to two scenarios, one of which already includes stressed parameters, the tests focused on measuring the impact of the variation in the weightings used in each scenario on the recoverable amount of each CGU.

The results of these sensitivity tests show that a weighting of the SG Base scenario at 65% (instead of 70%) and of the SG Prolonged scenario at 35% (instead of 30%) would result in a 0.8% decrease in the CGU's total recoverable amount, without requiring the recording of an additional impairment.

Source: Société Générale, Consolidated Financial Statements – 30.06.2020, p. 23

Goodwill

Impairment test at 30 June 2020

An interim impairment test was performed by comparing the estimated recoverable amount of a cash generating unit ('CGU') carrying goodwill, determined by a VIU calculation, with its carrying amount. At 30 June 2020, the goodwill allocated to Middle East and North Africa – WPB ($41m) was fully impaired.

As disclosed on page 290 of our *Annual Report and Accounts 2019*, a reasonable change in a single key assumption would not result in impairment of goodwill in our former Europe – RBWM CGU. Though taken together, a combination of reasonable changes in forecast cash flows (30% decrease) and an increase in the discount rate (by 100bps) could result in a recoverable amount that is lower than the CGU's carrying amount. The sensitivity profile of our new Europe – WPB CGU at 30 June 2020 is the same. Details regarding our change in global businesses are set out in Note 5.

No other CGUs are sensitive to changes in key assumptions that would result in impairment.

Source: HSBC Holdings plc Interim Report 2020, p. 114

10.3 Intangible assets: other information

The effect that these changes may have on the estimated cash flows of the different CGUs, as well as on the underlying assumptions, could therefore lead to different results in the coming financial years. By way of example, for the CIB CGU a cumulated reduction of 2020 and 2021 Net Profit of €100 million with respect to the estimates used in the 30 June 2020 impairment test would reduce by 5% the excess of the recoverable amount on the book value.

Source: UniCredit, Consolidated Financial Report as at 30 June 2020, p. 120

3.4.3 FACTORS OF UNCERTAINTY UNDERPINNING THE MEASUREMENTS IN THE FINANCIAL STATEMENTS

MAZARS INSIGHTS:

- Some banks disclosed a **complete list of accounting** estimates impacted by uncertainty relating to COVID-19, as per extract provided on this page.
- Topics covered by **UniCredit** go beyond the estimation of expected credit losses.

Part A - Accounting policies

Risk and uncertainty due to use of estimated figures

Under the IFRS, management must make judgments, estimates and assumptions that affect the application of accounting principles and the amounts of assets and liabilities and income and expenses reported in the accounts, as well as the disclosure concerning contingent assets and liabilities.

Estimates and related assumptions are based on previous experience and other factors considered reasonable under the circumstances and have been used to estimate the carrying values of assets and liabilities not readily available from other sources.

Estimates and assumptions are regularly reviewed. Any changes resulting from these reviews are recognized in the period in which the review was carried out, provided the change only concerns that period. If the revision concerns both current and future periods, it is recognized accordingly in both current and future periods.

In particular, estimated figures have been used for the recognition and measurement of some of the largest items in in the Condensed interim consolidated financial statements as at 30 June 2020, as required by the accounting policies and regulations described above.

In the first half of 2020 Covid-19 pandemic has spread in the regions in which the Group operates. Such pandemic and the associated lockdown measures put in place by governments in order to limit its spreading have severely affected the economic activity and, as consequence, Group profitability.

This circumstance has requested, as of 30 June 2020, a careful evaluation of certain items of financial statements whose recoverability depends on future cash flows projections and a consequent update in the impairment test performed on goodwill, investment in associates and deferred tax assets, by re-estimating the cash flows so to incorporate assumptions on the effects of Covid-19 pandemic.

In addition to Goodwill, Deferred Tax Assets and investments in associates, the slow-down of economic activity determined by Covid-19 pandemic and related lockdown measures have affected the evaluations of the following items as a result of downturn in the estimation of financial and non-financial input used for their measurement:

- fair value of financial instruments not listed in active markets;
- loans and receivables and in general, any other financial assets/liabilities;
- severance pay (in Italy) and other employee's benefits;
- provisions for risks and charges;
- real estate.

While evaluations have been made on the basis of information deemed to be reasonable and supportable as at 30 June 2020, the current scenario is affected by an high uncertainty whose outcome is not foreseeable at the moment and that may require changes evaluations performed in light of the evolution of the pandemic, the effect of relief measures put in place and the shape of economic recovery (e.g. V - shape versus U – shape). These factors will affect the Group profitability and, as a consequence, might require a revision in the cash flows projections, or other parameters, such as discount rates, used for assessing the recoverability of goodwill, investment in associates and deferred tax assets.

Furthermore, in light of the high uncertainty of current economic context, an update in the strategic plan Team 23, that reflects current conditions, will be presented by the end of 2020 or in the beginning of 2021. As a result, the evaluation made for Goodwill, Investments in associates and Deferred Tax Assets, whose recoverable amount depends on cash flows projections, might be subject to a change not foreseeable at the moment.

In addition the shape and extent of economic recovery, together with the macro-economic scenario which will be prevalent when relief measures put in place by governments and financial institutions will expire, might determine a change in the assessment of recoverability of loans and associated loan loss provisions potentially requiring an update in the input used for their evaluations.

Furthermore, with reference to the fair value of real estate and financial instruments not quoted in active market, uncertainty exists about how such fair value might develop in the future and about the possibility to sell the assets at the estimated prices.

Finally, the evolution, not foreseeable at the moment, in the markets of financial and non-financial assets might require an update of parameters used for the evaluation of real estate, financial instrument not quoted in active markets and provisions for risks and charges.

Further elements, in addition to Covid-19 pandemic, that determine uncertainty in the evaluations are (i) domestic and international socio-economic conditions and subsequent impact on the Group's profitability and customers' creditworthiness, (ii) financial markets which affect changes in interest rates, prices and actuarial assumptions and (iii) real estate market affecting the value of property owned by the Group or received as collateral.

Source: UniCredit, Consolidated First Half Financial Report as at 30 June 2020, p. 69-70

3.4.4 STATEMENT OF GOING CONCERN

MAZARS INSIGHTS:

- In accordance with the recommendation from regulators and accounting authorities, several banks have explained to what extent COVID-19 was considered in the going concern assessment of their groups.
- **UniCredit** has supported this statements with regulatory quantitative data regarding the respect of capital adequacy requirements.
- **HSBC** has instead included cross-references to the other chapters of their interim report or to the previous annual report.

11 Going concern basis

As mentioned in Note 1 'Basis of preparation and significant accounting policies' on page 98, the financial statements are prepared on a going concern basis as the Directors are satisfied that the Group and parent company have the resources to continue in business for the foreseeable future. In making this assessment, the Directors considered a wide range of information relating to present and future conditions, including future projections of profitability, cash flows, capital requirements and capital resources. These considerations include stressed scenarios that reflect the increasing uncertainty that the global Covid-19 pandemic has had on HSBC's operations, as well as considering potential impacts from other top and emerging risks, and the related impact on profitability, capital and liquidity.

In particular, HSBC's principal activities, business and operating models, strategic direction and top and emerging risks are addressed in the Overview section. A financial summary, including a review of the consolidated income statement and consolidated balance sheet, is provided in the 'Interim management report' section. HSBC's objectives, policies and processes for managing credit, liquidity and market risk are described in the Risk section of the *Annual Report and Accounts 2019*. HSBC's approach to capital management and allocation is described in the Capital section of the *Annual Report and Accounts 2019*.

Source: HSBC Holdings plc Interim Report 2020, p. 125

Part A - Accounting policies

Statement of going concern

In their joint Document No.4 of 3 March 2010, Banca d'Italia, Consob and ISVAP made a few observations on the current situation of the markets and businesses and requested that information essential for a better understanding of business trends and outlook be disclosed in financial reports.

The Directors observed that the emergence of Covid-19 pandemic during the first half of 2020 and the associated lock-down measures, have determined, as mentioned above, negative effects that are expected to be offset, only in part, by the economic relief measures put in place by the Governments.
The Directors have considered these circumstances in the assessments of significant items of the financial statements, and on the basis of these assessments, also acknowledging the current uncertainty surrounding the economic recovery and the long-term impact of the lock-down measures adopted, believe with reasonable certainty that the Group will continue to operate profitably in the foreseeable future; as a result, in accordance with the provisions of IAS1, the document "Consolidated First Half Financial Report as at 30 June 2020" was prepared on a going concern basis.

Based upon the aforementioned evaluations, the main regulatory ratios have been taken into account at 30 June 2020, in terms of: (i) the exact figures at 30 June 2020 (CET1 ratio equal to 14.54%; TLAC ratio equal to 24.90%; Liquidity Coverage Ratio at 148% based on monthly average on 12 months); (ii) the related buffer versus the minimum requirements at the same reference date (CET1 ratio: excess of 549 basis points; TLAC Ratio: excess of 534 basis points; Liquidity Coverage Ratio: excess of more than 48 percentage points); (iii) the expected evolution of the same ratios during 2020 ((for example, with reference to the CET1 ratio expected evolution during 2020, it is considered to be able to guarantee a margin above Overall Capital Requirements, so called "MDA buffer", above the range of 200-250 basis points that the Group has set as its own target in the medium/long term).

The measurement criteria adopted are therefore consistent with this assumption and with the principles of accrual-based accounting, the relevance and materiality of accounting information, and the prevalence of economic substance over legal form.
These criteria have not changed with respect to the previous year.

Source: UniCredit, Consolidated First Half Financial Report as at 30 June 2020, p. 70-71

APPENDIX – RISKS AND OPPORTUNITIES RELATED TO COVID-19

Risks and opportunities

The developments noted in the six months ended June 30, 2020, with the exception of impacts from COVID-19, did not materially alter our assessment of the risks and opportunities that our businesses are exposed to as laid out in our Annual Report 2019.

COVID-19

With regard to the rapidly unfolding COVID-19 pandemic, downside risks have materially increased year-to-date. These risks could materialize individually as well as simultaneously and potentially affect a number of themes highlighted in our Annual Report 2019. Therefore the negative impact on our business environment could fluctuate significantly and adversely affect our business, results of operations or strategic plans and targets, as well as our share price.

The largely unprecedented economic disruption caused by the COVID-19 pandemic has resulted, at least temporarily, in an extremely severe GDP contraction in all major economies. While our baseline expectation is for an economic recovery starting in the second half of 2020, if the pandemic is protracted or re-emerges, including by way of a second wave, this could amplify the current negative demand and supply chain effects as well as the negative impact on global growth and global financial markets. In addition, a further extension of the prolonged low interest rate period in the Eurozone has become more likely.

To alleviate the high level of uncertainty, numerous states have introduced moratoria for private clients and small businesses, as well as supporting measures such as state-backed credit programs for corporates. In light of the expiry of these moratoria, which is expected in the second half of 2020, the bank will continue to monitor relevant portfolios. It is currently unclear how expected changes to moratoria may impact our revenue generating capabilities from these loans going forward.

So far, we have observed a worsening of the creditworthiness of certain individual portfolios due to the deterioration of the economic situation, and this is reflected in our increased level of loan loss provisions. If the situation continues to worsen, it may lead to additional rating declines among our clients, further increasing loan losses as well as increased numbers of clients drawing down on (currently existing, but unused) credit facilities which would lead to an additional increase in capital requirements and liquidity demands. Higher volatility in financial markets could lead to increased margin calls both inbound and outbound. Policy measures taken by central banks and governments are helping to mitigate some of the short-term impacts.

The aforementioned external developments can impact our revenue generating capabilities, while market declines and volatility could also negatively impact the value of financial instruments and cause us to incur losses.

From an operational perspective, and despite the business continuity and crisis management policies currently in place, the COVID-19 crisis may adversely impact our business activities. The unprecedented move across global industries to conduct business from home and away from primary office locations increases the pressure on business practices, the demand on our technology infrastructure and also the risk of cyber-attacks which could lead to technology failures, security breaches, unauthorized access, loss or destruction of data or unavailability of services. Any of these events could result in litigation or result in a financial loss, disruption of our business activities and liability to our customers, government intervention or damage to our reputation. At the same time the cost to us of managing these cyber, information security and other risks remains high. Delays in the implementation of regulatory requirements, including consumer protection measures and of our strategic projects, could also have a negative impact on our revenues and costs, while a return of higher market volatility could lead to increased demand on surveillance monitoring and processing.

All of the above could have a material impact on our CET 1 ratio. As previously announced, it is therefore possible that we will fall below our CET 1 target of at least 12.5 % in upcoming periods. Whilst the Liquidity Coverage Ratio remained above the regulatory minimum during the second quarter of 2020, the risk of a second wave of COVID-19 and a deeper and more protracted economic recession may put pressure on liquidity metrics during the remainder of the year and lead to liquidity and funding outflows. At the same time, this might temporarily impact our cost of funding and therefore adversely affect our profitability. Action has been taken by regulators in Europe and in other regions to provide targeted and temporary flexibility from elements of the prudential framework to avoid unintended pro-cyclical effects. For instance at the European level, changes made to the Leverage Ratio, allowing the netting of pending settlements and exceptional changes to the market risk RWA framework, where excesses relative to modelled outcomes would previously have given rise to increased capital requirements, were relaxed.

In addition, the disruption caused by the COVID-19 pandemic could also adversely impact the review, testing and measurement of impairment of goodwill and intangible assets. The valuation of our deferred tax assets may also be affected.

In order to manage financial and non-financial risk impacts of COVID-19, Deutsche Bank is utilizing dedicated governance structures including Global and Regional Crisis Management. More broadly and where relevant, additional controls and processes have been established including additional reporting to ensure relevant senior stakeholders including the Management Board are up-to-date.

Besides posing significant risks, the COVID-19 pandemic also presents potential opportunities. The COVID-19 crisis has uncovered the need and driven the push for digitalization across various industries, with digitalization projects and strategies being prioritized in the current environment. This is giving us the opportunity to service our customers faster through newly emerging digital touchpoints as well as the opportunity to co-innovate jointly, which could have a positive impact on our revenues.

The COVID-19 crisis also impacted the bank's cost structure. Whilst in the short term it was required to equip branches & office buildings with anti-infection supplies, we are now assessing options to sustainably reduce e.g. real estate cost through continued higher levels of working from home. Certain cost categories have been positively impacted by COVID-19 temporarily, such as Travel & Entertainment and Marketing & Events.

In addition, existing contracts with vendors and service providers pose the risk, particularly given conditions resulting from the COVID-19 pandemic, that these counterparties could be unable to fulfil their contractual obligations, putting the benefits we seek to obtain from such contracts at risk.

Among the risks arising from the COVID-19 pandemic is the potential for adverse impact on our ability to retain and attract employees and on employee attrition. Due to the lockdowns and generally positive reception of work-from-home programs, employees may decide in the future that returning to an office environment is no longer desirable. In addition, further pressure on our financial performance as a result of the COVID-19 pandemic could impact the levels of compensation we can offer, which could put the Group at a disadvantage to our competitors in attracting and retaining talented employees. The COVID-19 pandemic may also significantly delay or reduce the rate of regular employee attrition, putting pressure on the Group meeting its headcount and cost targets.

Source: Deutsche Bank, Interim Report as of June 30 2020, p. 28-29

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