

**IFRS 9 IMPLEMENTATION  
BY EU INSTITUTIONS**

MONITORING REPORT

EBA/Rep/2021/35  
24 November 2021

Luxembourg: Publications Office of the European Union, 2021

© European Banking Authority, 2021

Reproduction is authorised provided the source is acknowledged.

For any use or reproduction of photos or other material that is not under the copyright of the European Banking Authority, permission must be sought directly from the copyright holders.

# **IFRS 9 IMPLEMENTATION BY EU INSTITUTIONS**

MONITORING REPORT





# Contents

---

<b>List of figures</b>	<b>5</b>
<b>List of tables</b>	<b>8</b>
<b>Abbreviations</b>	<b>9</b>
<b>1. Executive summary</b>	<b>10</b>
<b>Part 1: Background and Objectives</b>	<b>16</b>
1.1. Implementation of IFRS 9 in the EU and objective of the monitoring exercises	16
1.2. Methodology	18
1.2.1. Sample of banks	18
1.2.2. Qualitative survey on IFRS 9 implementation	19
1.3. Representativeness of the data collected for the quantitative analyses on Low Default Portfolios	19
1.4. Identification of outliers	21
1.5. Main caveat and limitations	21
<b>Part 2: Main findings and observations</b>	<b>23</b>
<b>2. Staging assessment: analyses on SICR and LCRE</b>	<b>23</b>
2.1. Significant increase in credit risk assessment	25
2.2. Transfers to Stage 2	30
2.3. Alignment between the Definition of Default (DoD) and IFRS 9 exposures in Stage 3	36
2.4. SICR approach validation and key metrics used for monitoring	37
2.5. Application of the low credit risk exemption	39
2.6. Use of 12-month PD as a proxy for the lifetime PD	41
<b>3. Expected Credit Loss Models</b>	<b>42</b>
3.1. Type of Expected Credit Loss (ECL) models	43
3.2. Impact of COVID-19 on ECL models	44
3.3. Model limitations and use of overlays	45
3.3.1. General observations on the use of overlays	45
3.3.2. Specific observations on the ECL overlays	46
3.3.3. Approach used to determine COVID-19 overlays	49
3.4. Other observations regarding ECL measurement in a COVID-19 scenario	50
3.5. Differences between Accounting and Prudential concepts (ECL vs EL)	53
<b>4. IFRS 9 PD variability and robustness</b>	<b>56</b>
4.1. Variability in the IFRS 9 PD and interplay with IRB estimates	57
4.2. Evolution of IFRS 9 PD with COVID-19	60

---

4.3. Differences in the use of existing IRB models for IFRS 9 estimates	63
4.3.1. Difference in the definition of default	64
4.3.2. Difference in the risk differentiation	64
4.3.3. Difference in the risk quantification	65
4.4. Use of ECL overlays at the IFRS 9 PD level	68
<b>5. Incorporation of forward-looking information (FLI)</b>	<b>70</b>
5.1. Variability in the impact from forward-looking information	71
5.1.1. Source of FLI and in consideration of public support measures	73
5.1.2. Approaches used for taking into account the non-linearity in the macroeconomic scenarios	74
5.1.3. Diverging practices introduced in the context of the pandemic	79
5.1.4. Sensitiveness of IFRS 9 PD to the changes in the macroeconomic variables	82
5.2. Interplay between IFRS 9 and internal stress test	83
5.3. Frequency in the update of forward-looking information	87
5.4. Use of sensitivity analyses	88
<b>6. Classification and measurement</b>	<b>89</b>
6.1. Business model assessment	90
6.2. Solely payment of principal and interest (SPPI) test	95
<b>7. Recognition and derecognition</b>	<b>97</b>
7.1. Derecognition assessment	98
7.2. Write-offs policy	99
7.3. Presentation of interest income	101
<b>8. Application of IFRS 9 Transitional Arrangements and other prudential observations</b>	<b>103</b>
8.1. Application of IFRS 9 transitional arrangements	104
8.2. Immovable property collateral valuation	107
<b>Part 3: Next steps and areas of further work</b>	<b>109</b>
<b>9. Next steps and areas of further work</b>	<b>109</b>
9.1. Follow-up work on the IFRS 9 benchmarking exercise	109
<b>10. Annex</b>	<b>111</b>
10.1. Annex 1: EBA publications and data collections on IFRS 9	111
10.2. Annex 2: Information on the sample of institutions within the scope of the IFRS 9 benchmarking exercise	112
10.3. Annex 3: Methodology to measure PD variability	113
10.4. Annex 4: Kendal tau and correlation	115
10.5. Annex 5: Table per country with detailed overview of the application of IFRS 9 transitional arrangements	116

# List of Figures

---

<b>Figure 1.</b> Representativeness for each institution (exposure value)	20
<b>Figure 2.</b> Ratio between i) the exposure value of the facilities used for the purpose of the quantitative analyses on SICR and on the low credit risk exemption and ii) the exposure value of the common counterparties submitted	21
<b>Figure 3.</b> Limited implementation of a SICR collective assessment approach (IFRS 9 examples)	27
<b>Figure 4.</b> Limited use of a top-down SICR collective assessment approach	27
<b>Figure 5.</b> Transfers from Stage 1 to Stage 2 justified by SICR overlays	28
<b>Figure 6.</b> Percentage of transfers from Stage 1 to Stage 2 justified by SICR overlays per bank	28
<b>Figure 7.</b> Share of institutions using top-down approach for collective assessment and/or overlays	29
<b>Figure 8.</b> Changes to the overall SICR approaches: discrimination of obligors and public support measures	30
<b>Figure 9.</b> Total transfers from Stage 1 to Stage 2	30
<b>Figure 10.</b> Total transfers from Stage 1 to Stage 2 for subgroups of institutions (December 2019 and December 2020)	31
<b>Figure 11.</b> Comparison of the share of exposures classified in Stage 1 despite a threefold increase in PD since the origination	31
<b>Figure 12.</b> Allocation of credit risk allowance per stage	34
<b>Figure 13.</b> Allocation of on-balance-sheet items per stage	34
<b>Figure 14.</b> Evolution of coverage ratio for all the stages of impairment (simple average)	35
<b>Figure 15.</b> Non-performing exposures allocated to IFRS 9 Stage 3	37
<b>Figure 16.</b> Transfers from S2 to S3 and transfers back from S3 to S2	37
<b>Figure 17.</b> Key metrics to validate SICR assessment approach	38
<b>Figure 18.</b> Consequences of the impact from the COVID-19 pandemic and effectiveness tests performed on the staging process	38
<b>Figure 19.</b> Application of the LCRE by institutions in the sample	
<b>Figure 20.</b> Number of institutions applying the LCRE per portfolio	40
<b>Figure 21.</b> PD threshold associated with the LCRE for Stage 1 exposures	41
<b>Figure 22.</b> Adjustments performed to ECL models	44
<b>Figure 23.</b> COVID-19 impact on the final ECL amount	44
<b>Figure 24.</b> Level at which manual adjustments/overlays have been considered	46
<b>Figure 25.</b> Share of ECL associated with overlays by type of portfolio (December 2019 vs June 2020)	47
<b>Figure 26.</b> Large corporate: Share of ECL associated with ECL overlays (both COVID-19 and non-COVID-19 related) (December 2019 vs June 2020)	47
<b>Figure 27.</b> Impact of ECL overlays per portfolio and types of overlays	48

---

Figure 28. Level of Stage 2 coverage ratios	49
Figure 29. ECL overlays used as a response to COVID-19 based on internal stress-testing analyses	50
Figure 30. ECL model modifications to reflect public support measures	50
Figure 31. Treatment of government guarantees	51
Figure 32. Future treatment of default and loss information in the historical databases	52
Figure 33. Levels of IRB surplus and shortfall as of December 2019 and 2020 (simple average)	54
Figure 34. Ratio 12M ECL (IFRS 9) over EL (IRB)	55
Figure 35. Variability in IFRS 9 12-month PD compared to the benchmark PD (December 2019 and June 2020)	57
Figure 36. Evolution of the variability of PD IFRS 9 between December 2019 and June 2020	58
Figure 37. Comparison of the variability of PD IFRS 9 and IRB PD in June 2020	59
Figure 38. Large corporate: Variability in IFRS 9 and IRB 12-month PD (December 2019 vs June 2020)	59
Figure 39. Large corporate: Evolution in the IFRS 9 and IRB PD 12 months in the 1H 2020	61
Figure 40. Large corporate: Evolution in the IFRS 9 and adoption of ECL COVID-19 overlays	61
Figure 41. Large corporate: Comparison between the average IFRS 9 and IRB 12-month PD (December 2019 vs June 2020)	62
Figure 42. Large corporate: Comparison between the average IFRS 9 and IRB 12-month PD (December 2020)	63
Figure 43. Use of IRB models for determining the IFRS 9 PD in case of Low Default Portfolios	64
Figure 44. PD concept used for the purpose of the ECL estimates	64
Figure 45. Kendall Tau between PD IFRS 9 and PD IRB (June and December)	65
Figure 46. Type of adjustments performed on the IRB model in the risk quantification	66
Figure 47. Large corporate: Use of overlays/manual adjustments at the PD level	68
Figure 48. Evolution in the IFRS 9 PD 12 Months for those institutions using overlays/manual adjustments	69
Figure 49. Institutions revising their baseline and downward scenarios in a more pessimistic manner	72
Figure 50. Impact from FLI incorporation into the final ECL number	73
Figure 51. Sources used for macroeconomic forecast and consideration of the impact of public measures	74
Figure 52. Approach used for evaluating the range of possible outcomes in the ECL amount	75
Figure 53. Changes in the range of scenarios and in their probability weights as a response to the pandemic	75
Figure 54. Average weights assigned to the 3 macroeconomic scenarios (LDPs)	76

---

Figure 55. Average weights assigned to the 3 macroeconomic scenarios (HDPs)	76
Figure 56. Impact on the total ECL recognised in the reference period when applying 100% probability weight to most upward and downward scenarios	76
Figure 57. Ratio between WA PD and PD baseline Box plot with 25th, 50th and 75th percentiles (December 2019)	77
Figure 58. Ratio between WA PD and PD baseline Box plot with 25 <sup>th</sup> , 50th and 75 <sup>th</sup> percentiles (June 2020)	77
Figure 59. Detailed forecasting period and reversion to long-term average	78
Figure 60. Changes in GDP growth for those institutions applying smoothing factors (in red) in comparison to the other banks in the sample	79
Figure 61. Example of institutions presenting an inversion in the severity of the forecast of the downward scenario	80
Figure 62. Large corporate: Impact on ECL amount associated with COVID-19 overlays	80
Figure 63. Examples of changes in the range of the IFRS 9 scenarios and in their probability weight for the sample of banks participating in the second ad hoc exercise	81
Figure 64. Sensitiveness in the IFRS 9 12-month PD to the GDP growth	82
Figure 65. Current use of IFRS 9 macroeconomic scenarios for other purposes	85
Figure 66. COVID-19 scenarios used for internal stress testing	86
Figure 67. EBA stress-test scenarios vs IFRS 9 scenarios	86
Figure 68. Internal stress-test scenarios vs IFRS 9 scenario	86
Figure 69. Severity of scenarios: IFRS 9 vs internal ST	87
Figure 70. Update of FLI used to calculate ECL	88
Figure 71. Sensitivity analysis: risk factors vs impact on ECL	88
Figure 72. Thresholds to assess 'insignificant in value' applied at the level of HTC portfolio	91
Figure 73. Real sales of debt securities: 2018 to June 2020	92
Figure 74. Assessment of 'sales frequency'	92
Figure 75. Number of breaches of threshold in terms of frequency or volume of sales	93
Figure 76. Identification of the increase in credit risk for sales which occurred due to an increase in credit risk during the reference period for a subset of credit-impaired assets	93
Figure 77. Definition and implementation of 'close to maturity'	94
Figure 78. 'Close to maturity' concept – assessment whether the proceeds from sales approximate the collection of the remaining contractual cash flows	94
Figure 79. Type and number of reclassifications since the first application of IFRS 9	95
Figure 80. Proportion of financial assets which require quantitative benchmark analysis	96
Figure 81. Thresholds for assessing if the cash flows significantly different from the benchmark cash-flows in each reporting period and cumulatively	96

---

<b>Figure 82.</b> Criteria used to assess whether or not the modification of financial assets leads to the derecognition of original exposure	98
<b>Figure 83.</b> Types of other qualitative modifications	99
<b>Figure 84.</b> Total write-offs	100
<b>Figure 85.</b> Proportion of recoveries after write-offs	100
<b>Figure 86.</b> P&L line where a correction is considered	101
<b>Figure 87.</b> Policy on recognition of penalty interest related to Stage 3 exposures in the statement of profit or loss	102
<b>Figure 88.</b> Policy on recognition and presentation of the accrued interest related to non-performing debt instruments measured at fair value through profit or loss	102
<b>Figure 89.</b> Application of the IFRS 9 transitional arrangements as of December 2019 and 2020 (EU level)	105
<b>Figure 90.</b> CET1 impact of the application of IFRS 9 transitional arrangements per type of approach (EU sample) presented in basis points	106
<b>Figure 91.</b> Changes in the application of IFRS 9 transitional arrangements (EU level)	106
<b>Figure 92.</b> Table per country with the approach selected by institutions as of December 2020 (EU level) and percentage of institutions changing their approach during 2020	107
<b>Figure 93.</b> Frequencies of revaluation of immovable property collateral for credit-impaired exposures	108
<b>Figure 94.</b> Methodology for revaluation of immovable property collateral for credit-impaired exposures	108
<b>Figure 95.</b> Timeline with EBA Publications and Data collections on IFRS 9 since November 2016	111

---

## List of Tables

---

<b>Table 1.</b> Sample of institutions participating in the second ad hoc exercise	19
<b>Table 2.</b> Key statistics on the representativeness for EAD as of December 2019 for the analyses on IFRS 9 PD	20
<b>Table 3.</b> Impacts from financial covenants suspension	53
<b>Table 4.</b> Main differences between IFRS 9 PD and regulatory PD	67
<b>Table 5.</b> Representativeness of the sample of institutions within the scope of the IFRS 9 benchmarking exercise (EUR Bn)	112
<b>Table 6.</b> Example on the Kendall tau coefficient	115

# Abbreviations

---

<b>AC</b>	amortised cost
<b>BCBS</b>	Basel Committee on Banking Supervision
<b>bps</b>	basis points
<b>CET1</b>	common equity tier 1
<b>COREP</b>	common reporting framework
<b>CRR</b>	Capital Requirements Regulation
<b>EAD</b>	exposure at default
<b>EBA</b>	European Banking Authority
<b>ECL</b>	expected credit loss
<b>EEA</b>	European Economic Area
<b>EU</b>	European Union
<b>FINREP</b>	financial reporting framework
<b>FVOCI</b>	fair value through other comprehensive income
<b>FVPL</b>	fair value through profit or loss
<b>HTC</b>	hold to collect
<b>IA</b>	impact assessment
<b>IAS 39</b>	International Accounting Standard 39 – Financial Instruments: Recognition and Measurement
<b>IASB</b>	International Accounting Standards Board
<b>IFRS 9</b>	International Financial Reporting Standard 9 – Financial Instruments
<b>IRB</b>	internal ratings-based
<b>ITS</b>	Implementing Technical Standards
<b>LCRE</b>	low credit risk exemption
<b>LDP</b>	low-default portfolio
<b>LGD</b>	loss given default
<b>NPE</b>	non-performing exposure
<b>PD</b>	probability of default
<b>POCI</b>	purchased or originated credit-impaired
<b>Q&amp;As</b>	questions and answers
<b>RWA</b>	risk-weighted asset
<b>SA</b>	standardised approach
<b>SICR</b>	significant increase in credit risk

# 1. Executive summary

---

**EBA continued to monitor and scrutinise the implementation of IFRS 9 in the EU.**

**Different practices observed between institutions which is something inherent to the flexibility embedded in the IFRS 9 standard.**

Since the publication of its last report on the first observations on the impact and implementation of International Financial Reporting Standard 9 'Financial Instruments' (IFRS 9) by EU institutions<sup>(1)</sup>, and as communicated in its IFRS 9 roadmap<sup>(2)</sup>, the EBA continued to monitor and scrutinise the implementation of IFRS 9 in the EU.

In addition to the qualitative monitoring of the implementation, from mid-2019, the EBA developed an IFRS 9 benchmarking exercise, building on its existing benchmarking exercises, in particular in the area of credit risk, in order to introduce the IFRS 9 accounting and modelling dimension into the global picture of the analysis of the risks and capital requirements.

Furthermore, in line with the statement published in March 2020<sup>(3)</sup>, the EBA has conducted additional activities with the aim of monitoring EU institutions' practices in the context of the COVID-19 pandemic, in order to better understand the impact of IFRS 9 on capital requirements, as well as the way banks are applying judgment in the assessment of the level of and changes in the credit risk of their exposures.

This report summarises the findings arising from the EBA's investigations since the publication of its last report in December 2018. These findings are meant to assist supervisors' evaluation of the quality and consistency of the ECL frameworks implemented by EU banks, in order to contribute to a high-quality and consistent application of the IFRS 9 standard. These findings will also be used by the EBA to continue its discussions on IFRS 9 implementation with banks, auditors and stan-

dard-setters. As communicated when publishing the IFRS 9 roadmap, the benchmarking exercise will be conducted under a medium-to-long-term perspective and the findings in this report can certainly not be considered as being the final status of the reflections.

Banks have generally made significant efforts to implement the IFRS 9 standards and adapt their systems to the requirements. The high level of judgment embedded in the standard keep it open to a wide variety of practices at this stage. No single practice appears to be a strong driver of the ultimate levels of provisioning. On top of the limited experience and history to date, the COVID-19 pandemic has required some rapid adjustments to models that could not have been tested over a long period of time. Close monitoring and investigations from a regulatory and supervisory perspective will hence be needed.

## Content of the report

This report is structured in the following manner:

- Part 1 (Introduction) includes background information on the EBA monitoring activities in the context of IFRS 9, incorporating the objectives of the analysis conducted.
- Part 2 (Main findings and observations) provides more information on the main findings from this monitoring exercise, with specific reference to the practices observed in the context of the COVID-19 pandemic.
- Part 3 (Next steps) describes future planned EBA initiatives in the context of the IFRS 9 monitoring.

## Main findings and observations

The main observations included in the report deal with the following aspects:

### A. Staging assessment

---

**Limited changes observed in banks' significant increase in credit risk (SICR) approaches during the first half of 2020. The use of a SICR collective assessment or any other approach to timely capture factors that would not be identified at an individual level remains very limited.**

---

<sup>(1)</sup> EBA report on first observations on the impact and implementation of IFRS 9 by EU institutions.

<sup>(2)</sup> EBA Roadmap for IFRS 9 deliverables, July 2019.

<sup>(3)</sup> EBA Statement on the application of the prudential framework regarding Default, Forbearance and IFRS 9 in light of COVID-19 measures, March 2020.

When assessing the practices in place to determine whether a certain financial instrument experienced a significant increase in credit risk (SICR) and, as such, should be transferred to Stage 2, limited changes were observed in banks' overall significant increase in credit risk assessments during the first half of 2020.

The use of a collective SICR assessment is definitely lacking, while such collective SICR approach can lead to relevant impacts in terms of transfers to Stage 2. Under a scenario like the COVID-19 crisis, under which some relevant information was potentially not available at individual level, especially the use of a top-down collective type of approach would have been expected.

Limited changes to the overall SICR assessment approaches applied as of June 2020, despite the need to accommodate practices on the discrimination of the obligors under COVID-19 support measures. SICR collective assessment continues not to be widely used across institutions and, instead, an individual assessment was often considered sufficient to adequately identify increases in the level of credit risk.

Based on the data collected, the lack of collective assessment, particularly a top-down approach, does not seem to be justified by the application of alternative approaches with a potentially similar outcome as, for instance, SICR overlays or manual adjustments. This is a point of attention for regulators and supervisors.

The impacts of the application of collective approaches might be material in terms of transfers to Stage 2 and similarly for SICR overlays. Overall, institutions applying overlays and/or performing a SICR collective assessment reported, on average, a higher level of transfers during the analysed periods.

Some other practices deserve further scrutiny from a supervisory perspective, dealing in particular with:

- a combination of absolute and relative thresholds with both criteria needing to be met to trigger a transfer to Stage 2. In this regard, it is recalled that stage transfer triggers defined in absolute terms (either as an absolute probability of default (PD) level or an absolute PD increase) are generally not considered to be in line with IFRS 9; or
- SICR thresholds determined based on a 'quantile approach'. Indeed, for portfolios with higher volatility in credit risk

this approach, for a selected quantile of the distribution, mechanically leads to higher relative thresholds than for less volatile portfolios. In any case, the calibration of the SICR threshold would need to be supported by sound evidence demonstrating that the related quantitative threshold does not result in a delay in the Stage 2 transfers.

There is also extensive use of the low credit risk exemption for certain institutions. Different practices across EU banks as regards the PD level associated with an instrument with low credit risk will also require heightened supervisory scrutiny. Significantly high thresholds may result in a delay in the Stage 2 transfers where this exemption is widely applied.

As regards the implemented accounting and regulatory definition(s) of default, good alignment between the two of them continues to be observed across institutions.

## B. Expected credit loss (ECL) models

---

**COVID-19 pushed IFRS 9 models outside their boundaries thereby increasing the use of overlays leading to more divergence in terms of materiality of the impact in the final ECL amount.**

---

Almost all institutions use an EAD\*PD\*LGD approach to measure ECL. Since the first application of IFRS 9, some adjustments were performed to the ECL models that appeared to be recalibration / significant changes for the majority of the institutions. COVID-19 pushed IFRS 9 models outside their boundaries thereby increasing the use of overlays leading to more divergence in terms of materiality of the impact in the final ECL amount.

Going forward, the use of overlays across EU institutions should be subject to continued monitoring, in order to investigate whether and to what extent banks will adjust their ECL models in order to incorporate the effects of overlays or if some type of overlays will be maintained, despite their expected temporary nature. In this regard, it is worth pointing out that, as indicated in the EBA Guidelines on ECL<sup>(4)</sup>, adjustments to allowances are expected to be used as an interim solution and should not be continuously used over the long term. Finally, good governance measures around the application of overlays are crucial.

<sup>(4)</sup> Guidelines on credit institutions' credit risk management practices and accounting for expected credit losses (EBA/GL/2017/06)

With regard to the materiality of impacts of COVID-19 on the levels of the ECL amount, significant diversity was observed across the institutions in the sample, with impacts ranging from negligible up to 50% or higher.

The overlays that were being considered by institutions as of December 2019 remained relatively constant between this date and June 2020. Those that were added on top during the first half of 2020 relate almost exclusively to the COVID-19 pandemic. Overlays can lead to a material impact in terms of the final ECL number and, as such, should be seen as a key area for regulatory and supervisory monitoring.

As shown by an analysis of the coverage ratios for Stage 2, the coverage levels are higher for institutions with more than half of portfolios subject to manual adjustment than for institutions applying adjustments for less than half of portfolios.

Given the unprecedented circumstances of the COVID-19 crisis, the application of temporary overlays was necessary in cases where the models could not cope with the specificities of the situation. However, it is paramount that these overlays are associated with appropriate governance measures and that supervisors have a good understanding of the methodological features underlying their design and application to ensure that the credit risk is appropriately reflected in the final impairment metrics.

Most of the institutions did not rely on internal stress-testing analyses to determine the overlays to be applied when measuring ECL.

Effects of the COVID-19 crisis are modelled in a very heterogeneous manner. Also, some diversity in practices was observed as regards the treatment of government guarantees.

### C. IFRS 9 PD variability and robustness

---

**The IFRS 9 12M PD estimates and variability generally increased during the pandemic, as a result of the incorporation of the forward looking information and their point in time nature, while the IRB PDs remained comparatively relatively stable.**

---

The data collected allow for a direct comparison of the bank's estimates for a set of common counterparties. As such, it is possible to disaggregate the risk-based variability (different PDs due to different counterparties) from the practice-based one (different PDs for the same counterparties).

The practice-based variability in the IFRS 9 12-month PD significantly increased in the context of the COVID-19 pandemic, while the IRB estimates remained substantially stable.

This pattern can be explained by the higher increase in the IFRS 9 12-month PD estimates observed in the first half of 2020, as a result of the more point-in-time nature of the IFRS 9 PD and the incorporation of forward-looking information (FLI). Indeed, for almost all the institutions in the sample, the increase in the IFRS 9 PD was larger than the IRB PD.

When assessing the practices adopted by institutions presenting a lower increase in the IFRS 9 12-month PD, it was observed that in the first half of 2020, some of them introduced certain adjustments (e.g. 'smoothing factors') to the macroeconomic variables underlying the IFRS 9 scenarios. Other areas of scrutiny relate to cases of institutions explicitly mentioning not having revised the IFRS 9 scenarios or showing a relative increase in the IFRS 9 PD similar to the one observed on the regulatory PD, raising concerns on the limited impact of forward-looking information on the IFRS 9 estimates.

Significant differences have been observed in the concept used for modelling the IFRS 9 PD and in the nature of adjustments applied when departing from the regulatory estimates to determine the IFRS 9 PD. The high degree of judgement involved in the estimate of the IFRS 9 risk parameters and the lack of supervisory validation for the IFRS 9 ECL models increase the importance for competent authorities to gather a thorough understanding of the IFRS 9 modelling practices, including the degree of leverage on the data and information used for regulatory purposes and of the factors that affect the variability in the IFRS 9 estimates in comparison to those used for regulatory purposes. In particular:

- Generally, those institutions for which a lower increase in the IFRS 9 12-month PD was observed introduced COVID-19 overlays at the ECL level. Nevertheless, in many cases, the impact of these overlays was not particularly relevant, raising some interrogations on whether such overlays could effectively compensate for the lack of reactivity observed in the IFRS 9 12-month PD. Cases where the low increase in the PD has not been compensated for by the use of overlays represent an area of further scrutiny for supervisors;

- The higher increase in the IFRS 9 12-month PD observed in 2020 also affected the interplay between the IFRS 9 and IRB PD. Indeed, in June 2020, more than half of the banks in the sample of the quantitative analyses presented an average IFRS 9 12-month PD higher than the IRB PD for the Large corporate exposure class. However, the data collected as of December 2020 seem to indicate that the interplay between the IFRS 9 12-month PD and the IRB PD is going to come back to a situation pre-COVID-19.

#### D. Incorporation of forward-looking information

**The impact on ECL stemming from the incorporation of forward looking information increased during the pandemic and varied significantly across institutions. Some practices have been observed that deserve further scrutiny from supervisors.**

The impact on ECL stemming from the incorporation of FLI, whilst increased during the pandemic, varied significantly across institutions. Evidence collected reinforces the need for supervisors to further investigate the approaches used for incorporating forward-looking scenarios in the ECL measurement, including, *inter alia*, the assumptions underlying the different scenarios and their impact on the final ECL amount. In this context, consideration should be given, in particular, to the scrutiny of the severity of the assumptions underlying the downward scenarios, in order to assess whether they appropriately reflect the risk of a further deterioration in the macroeconomic outlook and do not include overly optimistic assumptions on the expected recovery. More generally, when assessing the practices used for the incorporation of FLI, some aspects have been observed that deserve further consideration from a supervisory perspective. In particular:

- Despite the changes introduced as a response to the COVID-19 crisis (in particular to introduce additional and more pessimistic scenarios or assign a higher probability weight to the original downward scenarios), the IFRS 9 12-month PD estimates are still significantly driven by the assumptions underlying the baseline scenario, raising concerns about the limited degree of the impact from the non-linearity in the multiple macroeconomic scenarios embedded in banks' models.

- Sometimes a single scenario without any adjustment/overlay to reflect non-linearity effects is used. This practice would not meet the objective of IFRS 9 unless there is a linear relationship between the different forward-looking scenarios and the associated credit losses.
- In other cases, extremely long forecasting periods or approaches involving a reversion to the mean over a long time-frame are used, raising some concerns on whether the information used for the IFRS 9 scenarios can be reasonably supported or considered representative for the purpose of the ECL measurement.
- In the context of the pandemic, some practices that were aimed at avoiding excessive variability in the IFRS 9 estimates could lead, in turn, to more through-the-cycle ECL estimates compared to the expectations from the accounting standard or to minimise the impact on the ECL measurement stemming from the non-linearity in the IFRS 9 macroeconomic scenarios.
- The interplay between IFRS 9 and internal stress-testing scenarios with reference, in particular, to the changes introduced during the pandemic remains an area to further monitor.

#### E. Classification and measurement

**A wide array of practices was observed in the context of the IFRS 9 business model assessment. Further scrutiny and guidance is deemed necessary.**

In the context of the classification and measurement requirements under IFRS 9, in particular with regard to the business model assessment aspects, a wide array of practices has been observed in terms of determining whether a sale is 'insignificant in value' or 'infrequent' in order to be consistent with a hold-to-collect (HTC) business model. Due to this lack of consistency, this area would deserve further attention and an adequate level of guidance and review.

As regards the reclassifications between different IFRS 9 categories of financial instruments, as expected under IFRS 9, only very few reclassifications were observed. Impacts arising from these reclassifications in terms of percentages of the respective categories were diverse, while the impact on CET1 is considered not material.

## F. Recognition and derecognition

**Some discrepancies have been observed in the derecognition of financial assets and/or recognition of accrued interest. These are two of the topics that would deserve further attention.**

Also in the field of recognition and derecognition of financial assets some discrepancies in the implemented practices have been observed across the institutions. While in some cases this results from the well-known principle-based nature of the accounting standards, in some other cases some further attention from regulators and/or supervisors is required, for instance, when high percentages of recoveries after write-offs are observed or when recognition and presentation of the accrued interest related to non-performing debt instruments leads to non-comparable outcomes (these aspects relate to particularly relevant figures used under the regular supervisory activities).

In light of the criteria that leads to the derecognition of a financial asset after a modification of its contractual conditions, approximately half of the institutions in the sample uses the 10% criterion complemented with other qualitative and/or quantitative assessment. In addition, the criteria seem to be applied independently of the impairment stage in which the financial asset is classified and they remained stable since their initial implementation.

Relevant factors lists are often complemented with expert judgement regarding the internal and external factors considered for assessing whether there is no reasonable expectation of recovery and, therefore, a total write-off is appropriate. Such factors, in particular in the case of the partial write-offs, remain quite heterogeneous.

In terms of percentages of recoveries after write-offs, the majority of institutions answering this question presented recovery percentages below 10%. However, there were some rare cases in which more than 30% of the amounts written-off were recovered. In this context, it is worth highlighting that if high percentages of recoveries after write-offs are observed on a continuous basis, internal policies might need to be enhanced. Given that a low quality of practices on this matter has a direct impact on key supervisory metrics, this point might deserve attention from regulators and supervisors as well as some additional guidance to improve internal accounting policies.

Policies on recognition and presentation of the accrued interest related to non-performing debt instruments measured at fair value through profit or loss show heterogeneity.

## G. Application of IFRS 9 transitional arrangements and other prudential observations

**Only one third of institutions made use of the IFRS 9 transitional arrangements under the CRR. The overall picture did not change materially, which indicates that only a few institutions decided to make use of the CRR quick-fix introduced in June 2020 as a response to the Covid-19 pandemic.**

**The simple average CET1 impact of the application of the IFRS 9 transitional arrangements was equal to 119 bps for the EU banking sector as of December 2020.**

IFRS 9 transitional arrangements have been extended via the CRR quick fix in 2020, bringing forward the original ending of the transition from December 2022 to December 2024. In addition, banks were authorised to change the initial approach chosen (in particular from an initial decision not to benefit from the transitional arrangements to a decision to benefit from them or to change the approach applied between static and dynamic components). As of December 2020, around one third of the institutions were using them, with only a few more institutions having decided to take the benefit of the changes from the CRR 'quick fix'. Among the institutions which decided to benefit from these provisions, the vast majority applied both static and dynamic components.

Irrespective of the type of approach applied, the simple average CET1 impact stemming from the application of the IFRS 9 transitional arrangements was equal to 119 bps for the EU banking sector as of December 2020. This level remains broadly stable in comparison with impacts observed before the amendments introduced by the CRR 'quick fix'.

The highest impacts were observed for the institutions which applied both static and dynamic components followed by the impacts of the static approach only. On the contrary, the impacts coming from the application of the dynamic approach only were less material.

In light of other prudential observations, annual revaluation of immovable property collateral for credit-impaired exposures is usu-

ally performed, which is seen by regulators and supervisors as a good practice. Differences in terms of the methodologies for the revaluation of immovable property collateral for credit-impaired exposures will require further investigation.

### Next steps

---

**Findings from the IFRS 9 monitoring report will be used by the EBA when reacting to the IASB post implementation review of IFRS 9.**

---

**EBA will continue the discussions with all interested parties and stakeholders.**

---

The EBA will continue monitoring and promoting consistent application of IFRS 9 as well as working on the interaction with prudential requirements. The last part of this

report explains in more detail the next steps for the benchmarking exercise and IFRS 9 monitoring activities in general.

The EBA will also leverage upon the findings collected so far to feed the discussions in light of the post implementation review (PiR) of IFRS 9, following the International Accounting Standards Board (IASB) work plan, in its short and more medium to-long-term dimensions, as well as feeding the reflections at EU level with regard to the previous resolution from the European Parliament on IFRS 9<sup>5</sup>.

Finally, the EBA will continue the discussions with all interested parties and stakeholders (banks and professional associations, auditors, Basel Committee on Banking Supervision, etc.), including, where relevant, the organisation of roundtables and bilateral interviews, focusing on the monitoring activities of IFRS 9 and, especially, the COVID-19 crisis and the related impact on the ECL and the links with own-funds ratios.



<sup>5</sup> [https://www.europarl.europa.eu/doceo/document/TA-8-2016-0381\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/TA-8-2016-0381_EN.pdf)

# Part 1: Background and Objectives

## 1.1. Implementation of IFRS 9 in the EU and objective of the monitoring exercises

1. The EBA continues to scrutinise the effective implementation of International Financial Reporting Standard 9 'Financial Instruments' (IFRS 9) in the European Union (EU). This activity started in 2016 and already resulted in the publication of three monitoring reports, including observations on the first IFRS 9 application based on the supervisory data reported by institutions [⁶].
2. The main challenge for regulators and supervisors is to ensure high-quality and an adequate implementation of the accounting standard, since the outcome of its application will directly impact the amount of own funds and regulatory ratios. In the particular case of expected credit losses (ECL) measurement, regulators and supervisors are not in a position to validate the accounting modelling aspects under IFRS 9, in contrast to the current situation in prudential areas, such as credit risk or market risk. This is the reason why monitoring regulatory/supervisory activities assume an increased importance. Such an aspect has become even more relevant following the outbreak of the COVID-19 crisis, given that previously implemented practices were adapted to the new economic reality and changes to the modelling techniques and processes were introduced by EU institutions to cope with the extraordinary circumstances of the pandemic.
3. In line with the roadmap on IFRS 9 deliverables published in July 2019 [⁷], the EBA conducted a benchmarking of the modelling techniques used by EU institutions for IFRS 9 purposes (hereafter 'IFRS 9 benchmarking exercise'). This exercise was aimed at collecting data and information that would enable a better understanding of the different methodologies, models, inputs and scenarios that could lead to material inconsistencies in the ECL measurement, affecting own-funds and regulatory ratios. In this context, given the commonalities between IRB models for credit risk and IFRS 9 models, it was decided to leverage the existing ITS on supervisory benchmarking when conducting the IFRS 9 benchmarking exercise, starting with the angle of Low Default Portfolios (LDPs) [⁸]. The main advantage of an analysis on LDPs is that the risk parameters can be compared for identical obligors to which the institutions are effectively exposed, limiting to a great extent one of the most challenging parts in comparative risk studies, which is the distinction of the influence of risk-based and practice-based drivers [⁹].
4. Therefore, some amendments have been introduced in Commission Implementing Regulation (EU) 2016/2070 [¹⁰] in order to incorporate a set of additional templates dedicated to IFRS 9, aimed at collecting information on the risk parameters estimated under this accounting standard (e.g., IFRS 9 12-month PD and IFRS 9 LGD) [¹¹], starting with LDPs.
5. In order to test the proposed amendments to the ITS on supervisory benchmarking, the EBA launched two ad hoc exercises. The first ad hoc exercise was launched in July 2019 (with reference date December 2018), while the second ad hoc exercise was launched in July 2020 (with two different reference dates: December 2019 and June 2020). Both ad hoc exercises included the following set of templates:
  - a. **Quantitative templates:** these templates were used as a test case for an integration of the IFRS 9 parameters into the ITS on supervisory benchmarking. At this stage of the exercise, the focus of these templates was limited to the LDPs, for which quantitative data were collected based on a

[⁶] EBA first observations on the impact and implementation of IFRS 9 by EU institutions, December 2018. Further information on the different EBA publications and data collections can be found in Annex 1: EBA publications and data collections on IFRS 9.

[⁷] EBA Roadmap for IFRS 9 deliverables, July 2019.

[⁸] Low Default Portfolios are considered to be exposures to Sovereigns, Institutions and Large corporates in line with the supervisory benchmarking activities already being previously conducted for credit risk.

[⁹] See the next steps section of this report for the future integration of High Default Portfolios (HDPs).

[¹⁰] Commission Implementing Regulation (EU) 2016/2070.

[¹¹] The IFRS 9 PD has already been integrated as part of the 2021 ITS on supervisory benchmarking. The IFRS 9 LGD is currently integrated into the ITS on 2022 supervisory benchmarking (first reference date December 2021).

common sample of counterparties. In particular, the information collected included, *inter alia*, quantitative data on the following aspects: IFRS 9 12-month PD, SICR assessment indicators and macroeconomic forecasts.

- b. **Qualitative templates:** these templates were aimed at collecting detailed information on the accounting practices implemented across institutions with specific reference to aspects such as the SICR assessment, the ECL measurement and the use of

forward-looking information. As a difference compared to the quantitative templates, the scope of the qualitative templates also included institutions applying the standardised approach (SA) for credit risk and was not limited to the LDPs, but covered, instead, a larger scope of portfolios [12].

[12] On top of the LDPs, the following portfolios were also in scope: Debt securities – Non-financial corporations (other than large corporates); Loans and advances – Non-financial corporations (other than large corporates); HDP: Loans and advances – Households.

#### MORE INFO



### WHAT WERE THE CHANGES INTRODUCED IN THE ITS ON SUPERVISORY REPORTING WITH REFERENCE TO THE IFRS 9 BENCHMARKING EXERCISE?

Since 2015, the EBA has been conducting an annual supervisory benchmarking exercise for credit risk models. The underlying framework is mandated by Article 78 of Directive 2013/36/EU (CRD), which requires competent authorities to conduct an annual assessment of the quality of internal approaches used for the calculation of own-funds requirements. To assist competent authorities in this assessment, the EBA calculates and distributes benchmark values against which individual institutions' risk parameters can be compared. These benchmark values are based on data submitted by institutions as laid out in EU Regulation 2016/2070, which specifies the benchmarking portfolios, templates and definitions to be used as part of the annual supervisory benchmarking exercises. Based on the data collected and the competent authorities assessment, the EBA publishes annually a report which presents the main conclusions of the exercise, as well as a focus analysis on a particular topic which changes from year to year (e.g. variability of practices in the rating scales, risk parameters for specialised lending exposures, comparison with the risk weight of the standardised approach).

Given the commonalities between IRB models for credit risk and IFRS 9 models, the EBA decided to leverage the existing ITS on supervisory benchmarking when conducting the IFRS 9 benchmarking exercise. Therefore, some amendments have been introduced in Regulation 2016/2070 in order

to incorporate a set of additional templates aimed at collecting quantitative data on:

- a. the variability of the 12-month PD IFRS 9;
- b. the variability of the macroeconomic forecasts and the interaction between the PD IFRS 9 and the macroeconomic scenarios;
- c. indicators used when assessing SICR;
- d. the IFRS 9 LGD parameter.

The concept of a benchmarking exercise for IFRS 9 modelling builds on the reasoning that regulators and supervisors can leverage their expertise on prudential models and on benchmarking these models to at least tackle some of the accounting models' sources of variability and the consequences in terms of prudential ratios. In addition, the analysis conducted as part of the benchmarking exercise will feed the IASB's post-implementation review of the IFRS 9 standard.

Finally, as further illustrated in the IFRS 9 roadmap, a staggered approach has been followed by the EBA for the purpose of the implementation of the IFRS 9 benchmarking exercise. Thus, at this stage, the focus of the quantitative templates is limited to the Low Default Portfolios. As a next step of the exercise, the EBA will progress on the integration of the High Default Portfolios (HDPs [13]) into the ITS

[13] High Default Portfolios are considered to be exposures to Residential Mortgages, SMEs, Corporates and SME retail

on supervisory benchmarking. In addition, at a later stage of the project, the IFRS 9 benchmarking exercise will also be extended to those institutions applying

the standardised approach for credit-risk purposes, for which further consideration would be needed, given the more limited modelling experience.

6. Furthermore, the EBA collected additional data with reference, in particular, to (i) classification and measurement of financial instruments; (ii) recognition and derecognition criteria; (iii) staging assessment governance aspects; (iv) ECL measurement governance aspects and forward-looking information (from a governance and back-testing perspective); and (v) the use of the IFRS 9 CRR transitional arrangements. This information was also collected for two reference dates (December 2019 and June 2020).
7. In March 2020, the EBA published a statement on the application of the prudential framework regarding Default, Forbearance and IFRS 9 in light of COVID-19 measures [14], providing clarity on certain aspects related to the application of IFRS 9 under the extraordinary circumstances of the pandemic. In this context, the EBA pointed out its intention to continue its efforts, and started with the monitoring of the IFRS 9 implementation to analyse institutions' practices during the COVID-19 pandemic in order to better understand the impact of IFRS 9 on capital requirements as well as the practices banks are following when exercising judgment in the assessment of the credit risk level of their exposures. The EBA also stressed the importance of distinguishing between obligors for which the credit standing would not be significantly affected by the current situation in the long term, from those that would be unlikely to restore their credit worthiness.
8. In light of this, additional data were collected both as of December 2019 (scenario pre-COVID-19) and as of June 2020 (after the outbreak of COVID-19), in order to evaluate the impact stemming from COVID-19 on the ECL modelling practices as well as the changes introduced by EU institutions as a response to the pandemic.
9. This report is meant to summarise the observations and the findings arising from the data and information collected by the EBA from the launch of the benchmarking exercise, including i) the observations

[14] EBA Statement on the application of the prudential framework regarding Default, Forbearance and IFRS 9 in light of COVID-19 measures, March 2020.

stemming from the ongoing monitoring of the IFRS 9 indicators developed by the EBA on the basis of the supervisory data reported by banks to competent authorities via COREP/FINREP templates [15]; and ii) the additional quantitative data gathered through the ITS on supervisory benchmarking (collected for the first time on the reference date 31 December 2020) [16] and the two ad hoc exercises launched in July 2019 and July 2020. Lastly, this report elaborates on preliminary observations on the implications stemming from the COVID-19 crisis on the IFRS 9 application and on the modelling practices introduced as a response to the pandemic.

10. In addition, the report presents the information gathered through the EBA notifications on the application of the IFRS 9 CRR transitional arrangements, with a view to provide insight on the use of the amended transitional arrangements arising from the 'quick fix' of CRR II, meant to address the impacts coming from the COVID-19 pandemic.

## 1.2. Methodology

### 1.2.1. Sample of banks

11. The sample of institutions considered in the qualitative templates of the second ad hoc exercise is consistent with the one used in the previous EBA impact assessments with some necessary adjustments, mainly due to the exclusion of UK institutions [17]. The final sample consists of 47 institutions from 20 EU countries [18]. In terms of representativeness, the institutions in the sample cover roughly 60% of

[15] <https://www.eba.europa.eu/risk-analysis-and-data/risk-assessment-reports>.

[16] To note, for the purpose of this report the data collected via the 2021 ITS on supervisory benchmarking with reference date December 2020, have been taken into consideration only up to the submissions received by the end of July 2021.

[17] The main adjustments dealt with the exclusion of UK institutions and other needed corrections due, for instance, to the occurrence of mergers and acquisitions involving some institutions in the original sample.

[18] For the purposes of this report, every time there is a reference to 'institutions' it should be read as the total list of institutions included in the sample unless specified otherwise.

- the total assets of the EU banking groups applying IFRS (19).
12. Most of the banks in the sample are identified as global systemically important institutions or as other systemically important institutions. Moreover, as reported in the next Table, many institutions in the sample use both the standardised and IRB approaches to measure capital requirements for credit risk, except for 10 institutions that use purely the SA. To note, the institutions included in the scope of the exercise cover a broad range of business models. In particular, most of them correspond to cross-border local (44% of the sample) or universal (33%) business model, while the remaining have a cooperative (8%) or other type of business models (e.g.: corporate oriented, private, savings) (20).
  14. More detailed information on the sample used for the purpose of the IFRS 9 benchmarking exercise are presented in Annex 2: Information on the sample of institutions within the scope of the IFRS 9 benchmarking exercise, while an assessment of the representativeness of the quantitative analyses is included in Sub-section 1.3.

### 1.2.2. Qualitative survey on IFRS 9 implementation

15. The sample of institutions considered in the survey on IFRS 9 implementation launched in September 2020 is substantially aligned to that of the qualitative templates of the second ad hoc exercise, the only difference being one bank which participated in the survey, but not in the second ad hoc benchmarking exercise.

**Table 1: Sample of institutions participating in the second ad hoc exercise**

	Number of institutions	%
Mainly SA	6	13
Only SA	10	21
Mainly IRB	18	38
Almost entirely IRB	14	29
<b>Total institutions considered for the exercise</b>	<b>48</b>	<b>100</b>

13. As mentioned before, different from the qualitative templates, at this stage of the IFRS 9 benchmarking exercise, the quantitative templates have been collected only from a high level of consolidation of the IRB institutions that are applying the IFRS 9 accounting standard. Therefore, the scope of the quantitative analysis conducted includes only 33 institutions from 15 EU countries (21). Moreover, with specific reference to the Large corporate exposure class, on which the majority of quantitative analyses are focused, the coverage in terms of total assets is higher than 60%. Finally, going forward, the data that will be collected via the ITS on supervisory benchmarking will enable an increase in the sample of institutions included in the scope of the quantitative analyses of the IFRS 9 benchmarking exercise.

(19) See Annex 2: Information on the sample of institutions within the scope of the IFRS 9 benchmarking exercise.

(20) For this purpose, EBA classification of business models has been used. See also Cernov, M., and Urbano, T. (2018), 'Identification of EU bank business models', EBA Staff Papers.

(21) The final number of institutions that passed the data quality checks for the quantitative analyses.

### 1.3. Representativeness of the data collected for the quantitative analyses on Low Default Portfolios

16. As further explained before, quantitative data was collected on a common sample of counterparties included in the LDPs since, for these portfolios, risk parameters can be compared for identical obligors to which the institutions have real exposures. The key limitation of this approach is the representativeness of the common sample of counterparties compared with the whole portfolio of each institution. Moreover, as further explained in Annex 3: Methodology to measure PD variability, the quantitative analyses are based solely on those counterparties that meet the following two conditions:
  - a. the counterparty is listed in the EBA benchmarking ITS;
  - b. at least three institutions have exposure to this counterparty.
17. However, as shown in Table 2, the representativeness of the common sample of counterparties reached for the purpose of the IFRS 9 exercise is similar to the one used in the IRB supervisory benchmarking exercise. In particular, on a median basis, approximately 20% of the exposure value of the Large corporate exposure class (LCOR) is covered by the exercise (22).

(22) This percentage represents the share of the EAD of the common counterparties over the EAD of the different exposure classes for LDPs. Such a ratio has been performed by considering only the counterparties for which a benchmark has been computed.

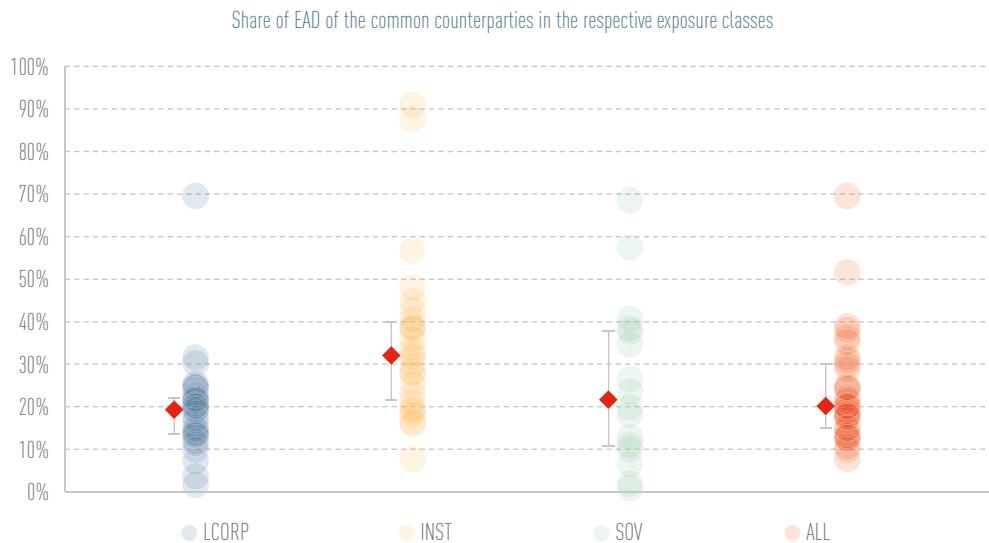
**Table 2: Key statistics on the representativeness for EAD as of December 2019 for the analyses on IFRS 9 PD [23]**

	LCORP	INST	SOV	ALL
Maximum	69%	91%	68%	69%
Percentile 90	25%	52%	49%	38%
Quartile 3	22%	40%	38%	30%
Median	19%	32%	22%	20%
Quartile 1	14%	22%	11%	15%
Percentile 10	10%	17%	4%	13%
Minimum	2%	8%	1%	8%
Number of banks	32	26	16	32

As can be inferred from the data included in the previous Table, the share of the Large corporate exposure class captured by the quantitative data collection, expressed in terms of exposure value, ranged between 2% and 69%. In other words, this means that one institution had 69% of its Large corporate exposure class composed of counterparties meeting two criteria: (1) the counterparty is listed in the EBA benchmarking ITS; and (2) at least two other institutions have exposure to this counterparty.

[23] One of the institutions in the sample did not submit information on the EAD for the LDPs.

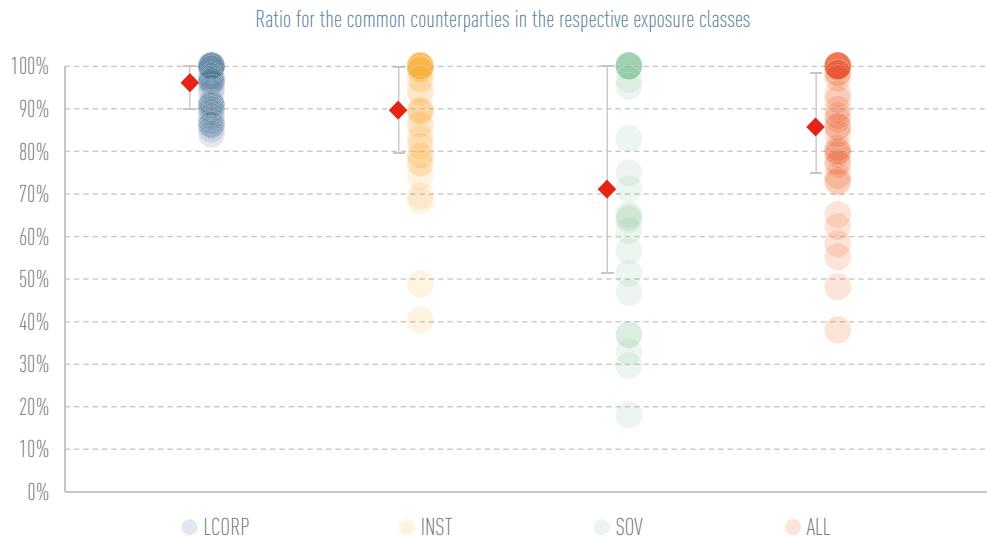
**Figure 1: Representativeness for each institution (exposure value)**



18. In addition, the quantitative analyses on SICR and on the application of the low credit risk exemption (LCRE) are based on a subset of the exposures toward the counterparties listed by the EBA since, in order to reduce the burden of the data collection as part of the IFRS 9 benchmarking exercise, institutions were asked to report for each counterparty solely the five facilities with the highest exposure amount. However, overall, such a limitation has not significantly affected the representativeness of the

quantitative analyses on SICR and the quantitative evidence collected on the application of the PD threshold for the LCRE. Indeed, as shown in the next Figure for Large corporates, the ratio between the exposure value of the facilities submitted and the exposure value of the common counterparties is around 90%. This is also due to the fact that some institutions preferred to report the whole portfolio of facilities toward the common counterparties, instead of limiting it to the top five facilities.

Figure 2: Ratio between i) the exposure value of the facilities used for the purpose of the quantitative analyses on SICR and on the low credit risk exemption and ii) the exposure value of the common counterparties submitted



#### 1.4. Identification of outliers

19. Some analyses have been performed on selected areas related to IFRS 9 implementation (e.g. approach used for SICR purposes, modelling of IFRS 9 12-month PD). For each of these analyses, some outliers have been identified across the banks in the sample. In this context, the insights collected per institution via the quantitative information have been also put into perspective with the information reported by the same institution through the qualitative templates, in order to find potential explanations, such as the existence of specific accounting practices in an institution that otherwise appear as outliers in the quantitative analysis. Notably, for each analysis performed, the respective outliers have been identified to relevant supervisors for discussion with the concerned institutions. To this end, detailed observations on differences in the practices adopted by outliers have been also communicated to the relevant supervisors.
20. In addition, divergent accounting practices were identified based either on the quantitative data and the qualitative information collected. These practices represent areas where further scrutiny is needed and have been presented in this report as findings of the assessment conducted.

#### 1.5. Main caveat and limitations

21. This report includes the evidence collected in particular for reference dates December 2019 and June 2020. While the EBA is aware that the data as of June 2020 could have been affected by the high degree of uncertainty that characterised the early stages of the COVID-19 crisis, in its view the evidence collected provides relevant insights on the effect of the pandemic on the ECL estimates and on the practices adopted by EU institutions as a response to COVID-19. The EBA acknowledges that, at the time of this data collection, institutions have had limited time to adapt their ECL models to cope with the effects of the pandemic and that additional changes have been introduced by many banks in the second half of 2020, the first half of 2021 or are expected to be introduced in the near future. To this extent, the findings and observations included in this report shall be well contextualised. Relevant changes in the ECL modelling practices introduced after this date (June 2020), while already being discussed in the several interactions with the industry, will also be further investigated as part of the next stages of the EBA monitoring activities on IFRS 9 implementation.

22. When analysing the IFRS 9 indicators computed on the basis of the supervisory data submitted (e.g. FINREP), December 2020 was considered the relevant reference date for the purposes of this report. While the qualitative information on accounting practices was collected in order to complement the benchmarking analysis with reference to June 2020 and possible amendments/improvements might have been considered and implemented by institutions during the second half of 2020, it was deemed more useful for the purposes of this report to provide the most recent available data (i.e. December 2020 instead of June 2020). This also allowed the use of real data for the year 2020, instead of considering extrapolated data based on June 2020 figures. The same type of analyses were conducted with June 2020 data (instead of December 2020) and no deviations from the trends presented in the report were identified.
23. Additionally, whenever possible and deemed appropriate, links between the qualitative assessment and the main conclusions of the quantitative analysis in terms of divergent IFRS 9 practices are presented in the report. The results presented should be read in conjunction with the caveats detailed in the respective subsections of the report, especially considering the slightly different scopes of the quantitative and the qualitative analyses performed.

## Part 2: Main findings and observations

### 2. Staging assessment: analyses on SICR and LCRE

#### KEY TAKEAWAYS



#### KEY TAKEAWAYS OF THIS SECTION

When assessing the practices in place to determine whether a certain financial instrument experienced a SICR and, as such, should be transferred to Stage 2, it was observed that very limited changes to the overall SICR assessment approaches were implemented by institutions during the first half of 2020. This observation also covers practices around the discrimination of obligors under COVID-19 support measures that, as is well known, was one of the aspects highlighted in the EBA Statement of March 2020. A relevant number of institutions have mentioned that a case-by-case analysis is still enough to perform a discrimination of obligors, even under the current circumstances. When looking at this and other type of implemented practices, the question that remains open is how are the specificities of such a crisis being contemplated in those approaches, especially when information at the individual level is not available. Specific procedures like, for instance, flag systems are, a priori, welcomed and desirable. However, close scrutiny might be needed in order to assess whether the objectives behind their implementation are actually being achieved and all reasonable and supportable information that is available without undue cost or effort is being adequately used. A few institutions have mentioned that they were not yet performing a discrimination of obligors which, at this stage and following the issuance of specific regulatory guidance on the topic, corresponds to a matter of concern from a regulatory and supervisory perspective.

One of the most surprising aspects observed from the data collected was the lack of use of a collective SICR assessment (in the exact terms of the illustrative examples provided under IFRS 9). Under a scenario like the one experienced with the COVID-19 crisis, especially the use of a top-down collective type of approach would have been expected. Under this approach, institutions would make more use of the available general information (for instance, on the most affected economic sectors) to adequately identify increases in credit risk warranting a consequent transfer of exposures to Stage 2. The exceptional economic situation that resulted from the COVID-19 crisis seems to be one of the scenarios for which this type of collective approach was designed and one of the cases that would fall directly under this IFRS 9 specification. While there might be good reasons not to apply it, this is certainly a matter that deserves additional scrutiny. Notably, as presented in detail in this section, the use of a collective SICR approach can lead to material impacts in terms of transfers to Stage 2 and the reasons for its 'non-application' should be well understood and documented. While non-implementation of a collective assessment approach, similar to the examples provided under IFRS 9, could still be justified by other types of approaches not conceptually similar, but producing similar results, for a relevant percentage of institutions in the sample, the lack of collective assessment based on the top-down approach does not seem to have been compensated for by the application of

overlays or manual adjustments. To recall, under IFRS 9, when an entity does not have reasonable and supportable information to assess SICR on an individual instrument basis, it should be done on a collective basis in order to approximate the result of doing it on an individual basis.

Whilst half of the institutions in the sample reported applying SICR overlays, only a few of them reported a significant share of exposures transferred to Stage 2 as a consequence of these overlays. Moreover, the limited use of COVID-19 SICR overlays observed across the banks in the sample reinforces the concerns on whether, in the context of the pandemic, institutions have set appropriate practices aimed at ensuring the timely recognition of a SICR and the consideration of all the relevant factors and reasonable and supportable information in the respective assessment.

It is also observed that institutions applying overlays and/or performing a SICR collective assessment have reported, on average, a higher level of transfers during the periods under analysis.

Concerns remain on whether the practices adopted by banks in these extraordinary circumstances resulted in a delay in the transfer to Stage 2, which may have significantly affected the final ECL number. Indeed, based on the quantitative evidence collected for LDPs, it seems that the share of exposures classified in Stage 1 with a three-fold increase in PD since the origination increased during the pandemic. While this observation cannot lead to an immediate conclusion on the quality of SICR assessment practices, it is an interesting metric to analyse in comparative terms with different reference dates.

In overall terms, while it is acknowledged that these observations might be justified

by the short period of time between the outbreak of the crisis and the reference date, there is a need to keep ‘SICR assessment approaches’ under close regulatory and supervisory scrutiny.

As regards the exemptions and simplifications allowed under IFRS 9, two main observations should be highlighted:

- IFRS 9 low credit risk exemption (LCRE) application by banks appears to be, for a few institutions, excessive, especially when taking into account the regulatory and supervisory expectations that were set on this matter at the EBA<sup>[24]</sup> and BCBS level, according to which the use of this exemption should be limited and always well-justified and documented. Moreover, some differences have been observed in the PD level associated with the LCRE. This lack of harmonisation affects, *inter alia*, the SICR assessment. Indeed, significantly high thresholds could result in a delay in the Stage 2 transfer, especially for those institutions, where the low credit risk exemption is widely applied;
- As regards the use of a 12-month PD as a proxy for the lifetime PD, there are some concerns as regards the rationale followed by a few institutions in the sample when deciding to use a 12-month PD instead of the lifetime PD. A proper review of the reasons behind this IFRS 9 simplification should be made by supervisors in order to ensure that it is being applied as intended.

As regards the transfers to Stage 3, in line with what was stated in the EBA IFRS 9 report published in December 2018, good alignment between accounting and regulatory definitions continues to be observed.

---

<sup>[24]</sup> EBA Guidelines on credit institutions’ credit risk management practices and accounting for expected credit losses.

## 2.1. Significant increase in credit risk assessment

MORE INFO



### WHAT IS STAGING ASSESSMENT UNDER IFRS 9?

The IFRS 9 approach to measure impairment distinguishes between '12-month expected credit losses' (Stage 1) and 'lifetime expected credit losses' (the Stages 2 and 3). In accordance with the requirements of the standard, at each reporting date, entities are required to perform a SICR assessment in order to determine whether the financial instruments have experienced a significant increase in credit risk since initial recognition but are not credit-impaired and, as such, should be transferred to Stage 2. In other words, instruments that have experienced a significant increase in credit risk would be classified as Stage 2, while defaulted instruments would be classified as Stage 3. Considerations on the definition of default for accounting purposes are provided in a different section of this report.

This SICR assessment will determine whether a loss allowance is based on the 12-month expected credit losses (Stage 1) or lifetime expected credit losses (Stage 2). It requires significant judgement and is based on the reasonable and supportable information that is available without undue cost or effort at each reporting date. Given the multiplicity of approaches that might be implemented by institutions as regards the SICR assessment and the impact that these different approaches might have on the overall ECL measure-

ment outcome, this is an area of great interest to regulators and supervisors. Under IFRS 9, this assessment is conducted on an individual basis and, when needed, on a collective basis as well (collective assessment). Illustrative examples of IFRS 9 (Example 5 IE38 – bottom-up approach and Example 5 IE39 – top-down approach) provide some guidance on how a collective assessment could be performed. This does not exclude that other methods could be applied with similar outcomes.

Under the bottom-up collective approach, the portion of a portfolio to be transferred to Stage 2 would be identified by grouping exposures into sub-portfolios on the basis of common borrower specific characteristics. Under a top-down collective approach, this identification would be done with the use of available general information (for instance, as regards a specific economic sector) at portfolio level. When facing a high uncertainty economic scenario as the one experienced with the COVID-19 crisis, a top-down collective approach is expected to assume particular relevance given that, at least, some general information is expected to be available without undue cost or effort which might not always be the case of information on common specific characteristics that would be needed to apply a bottom-up approach.

## MORE INFO

**WHAT ARE THE MAIN DIFFERENCES BETWEEN IFRS 9 AND US GAAP?**

As explained in detail in the EBA Thematic Note comparing provisioning practices in the US and the EU<sup>[25]</sup>, under the US current expected credit loss (CECL), lifetime ECL is recognised for all financial assets whereas under IFRS 9, the 12-month ECL is recognised for Stage 1 assets. In oth-

<sup>[25]</sup> Differences in provisioning practices in the United States and the European Union.

er words, under the US CECL there are no Stages. One of the conclusions of this note mentions that at the onset of a crisis, the IFRS 9 impairment model presumably resulted in a rise in cost of risk because of loan migrations from Stage 1 to Stages 2 or 3, for which lifetime ECL were recognised. However, this effect seems to be less material than the impact of applying the CECL approach to all financial assets.

**SICR individual and collective assessment and use of manual adjustments/overlays**

24. In general, limited changes to the overall SICR assessment approaches were observed as of June 2020. Despite the challenges and difficulties that arose with the current crisis, the guidance provided by regulators and supervisors, including the EBA Statement published in March 2020<sup>[26]</sup>, and the general acknowledgement that practices to identify an increase in credit risk would need to be reviewed, there is little evidence of changes introduced in the SICR assessment approaches when comparing pre COVID-19 periods' information to information collected during subsequent periods. This observation might be justified by the short period of time between the outbreak of the crisis and the reference date of the exercise or mitigated with the use of additional manual adjustments, interventions and/or overlays on top of the staging approach based on the indicators regularly monitored and considered in the period prior to COVID-19. In this report, detailed information on the possible mitigating factors for the lack of clear evidence of changes in previously implemented practices is provided. Observations pertain to (i) collective assessment; (ii) use of overlays; and (iii) discrimination of obligors. Independently of the identification of potential mitigating factors that would need to be assessed in depth on an individual basis, this is certainly an area where close mon-

itoring from a regulatory and supervisory perspective should be maintained.

- 25. As regards the regular indicators used to identify SICR on an individual basis, no major changes were observed in terms of practices followed when comparing June 2020 with December 2019. When looking at the LDPs under analysis, qualitative indicators assume particular relevance on the transfers occurred as, for instance, inclusion in a watch-list or 30 days past due. These indicators are very often combined with a change in the lifetime PD when assessing the possible occurrence of a SICR. When looking at HDPs, in particular at loans and advances to non-financial corporations or households, it becomes evident that the application of forbearance measures are, for a relevant number of institutions, very often used as an indicator of SICR. The use of indicators at the individual level has remained relatively stable over time and no specific concerns or points of attention were identified from the analysis performed on the data collected.
- 26. One of the stronger pieces of evidence that no significant changes were considered in the SICR assessment approaches is the fact that a SICR collective assessment, in terms of the two examples provided in IFRS 9<sup>[27]</sup>, was not used on a considerable scale as of June 2020<sup>[28]</sup> as already observed for previous reference

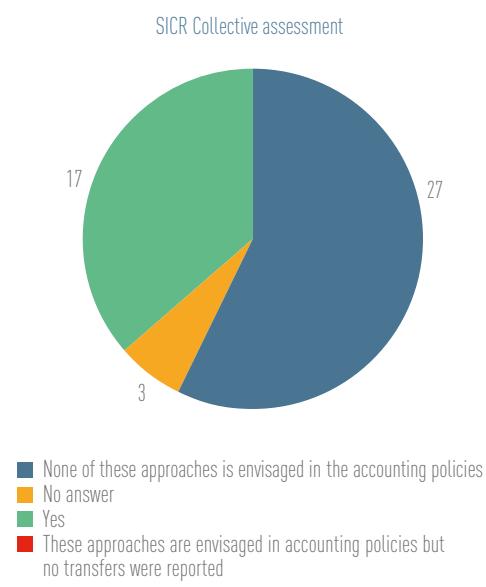
<sup>[27]</sup> IFRS 9 Example 5 IE38 (bottom-up approach) and IFRS 9 Example 5 IE39 (top-down approach).

<sup>[28]</sup> One explanation could potentially be that a type of SICR collective assessment is actually used, but without strictly following the 2 examples provided by the IASB. For the purposes of this exercise, institutions were invited to classify these situations (in the respective questionnaire) as manual adjustments/overlays or interventions.

<sup>[26]</sup> EBA Statement on the application of the prudential frameworks regarding Default, Forbearance, and IFRS 9 in light of COVID-19 measures.

periods (two-thirds of institutions in the sample not applying any type of collective approach as of June 2020, as presented in Figure 3). To note, this analysis corresponds solely to possible collective assessment approaches that are the same as those explicitly exemplified in the standard. Any other type of approach that could be used for similar reasons by the institutions and actually produce a similar effect were, for the purposes of this report, reported as manual adjustments, overlays or interventions<sup>{29}</sup> (hereinafter, overlays). When asked about the rationale behind the conclusion that none of these approaches is needed when performing the SICR assessment, most of the institutions stated that an individual assessment was considered enough to adequately identify increases in the level of credit risk, as the relevant risk factors were already being considered at this level.

Figure 3: Limited implementation of a SICR collective assessment approach (IFRS 9 examples)



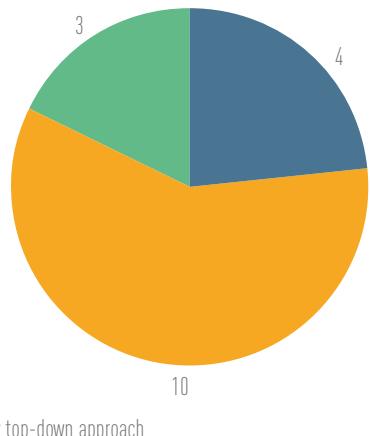
27. It could still be argued that the onset of a crisis with the characteristics of COVID-19 would not immediately trigger the implementation of a bottom-up approach as under such a scenario there might be a lack of specific information to adequately group exposures. On the contrary, it

<sup>{29}</sup> The information was collected on the basis that adjustments/overlays/interventions refer to any kind of manual adjustment or intervention to the assessment of SICR, that limit the degree of automation such as overrides to indicators (e.g. the rebuttal of the 30-dpd backstop indicator) or incorporation of single non-recurring events into the assessment of SICR (e.g. the consideration of certain political events; effects of the COVID-19 pandemic; etc.). In this context, only specific adjustments attributable to concrete aspects were reported.

would be expected that institutions would be making more use of the available general information (for instance, on the most affected economic sectors) to adequately identify increases in credit risk with the consequent transfer of exposures to Stage 2 (top-down collective approach under the illustrative examples of IFRS 9).

Figure 4: Limited use of a top-down SICR collective assessment approach

Approaches used by institutions reporting transfers due to collective assessment



28. The use of these collective SICR assessment approaches can have a material impact<sup>{30}</sup> on the level of transfers to Stage 2. From the data collected, the application of a bottom-up collective approach resulted, on average for the large corporate exposure class, in 9% of transfers to Stage 2 as of December 2019. This figure increased to 34% as of June 2020.

29. In case of the application of a top-down collective assessment on portfolios to which its use would be somehow expected, the following increases in the transfers to Stage 2 justified by this type of approach were observed:

- Loans and advances – Households: 10% in December 2019 to 16% in June 2020, with very few institutions in the sample reporting transfers occurred;
- Loans and advances – Non-financial corporations: 2% in December 2019 to 7% in June 2020, with very few institutions in the sample reporting transfers occurred.

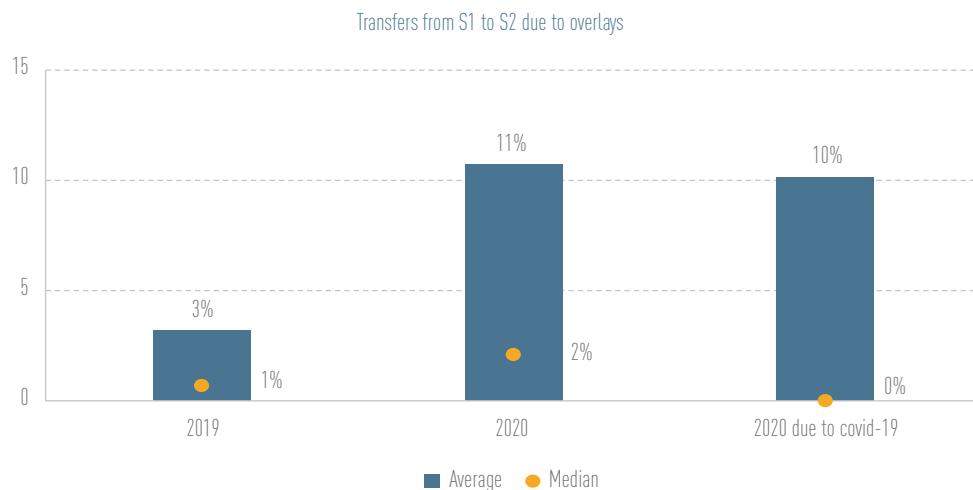
<sup>{30}</sup> Figures reported by institutions in terms of 'the total carrying amount of the total financial instruments transferred to Stage 2 during the reference period, independently of the respective portfolio'.

30. Whilst half of the institutions in the sample reported applying manual adjustments, interventions and/or SICR overlays (hereinafter, overlays), as shown in Figure 6, only a few of them reported a significant share of exposures transferred to Stage 2 as a consequence of these overlays. Moreover, the limited use of COVID-19 SICR overlays represents a point of attention for supervisors, raising concerns on whether, in the context of the pandemic, institutions have set appropriate practices aimed at ensuring the timely recognition of a significant increase in credit risk and the consideration of all the relevant factors and information in the SICR assessment. At the same time, further supervisory scrutiny is needed also

in those cases where a significant portion of Stage 2 transfers was driven by the use of non-COVID-19 related SICR overlays, even before the outbreak of the pandemic, since this might pose concerns on the expected temporary nature of these overlays and on the effectiveness of the approaches used for the purpose of the SICR assessment.

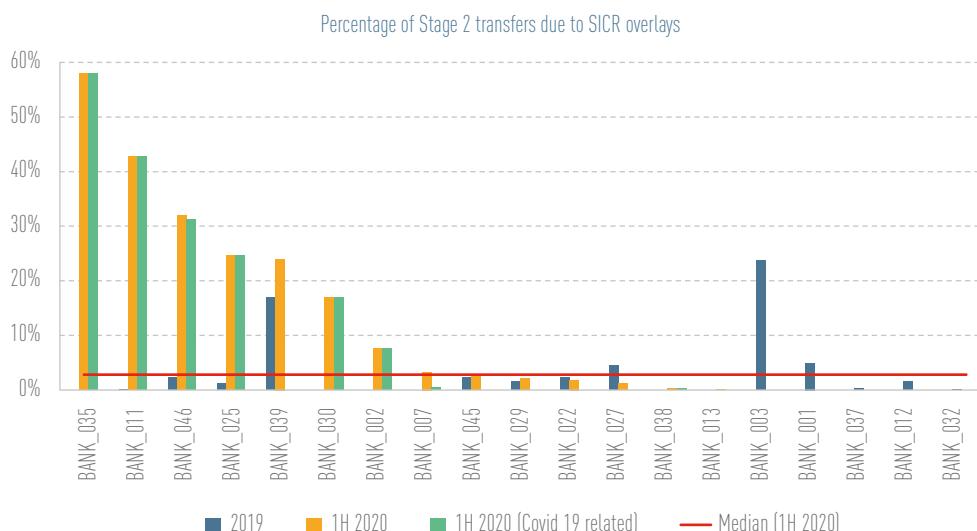
31. Figure 5 presents how the transfers to Stage 2 due to SICR overlays evolved from December 2019 and, similarly to the observations on the use of a collective assessment, it becomes evident that this accounting practice can produce a material impact. The majority of the materially relevant transfers due to overlays as of June 2020 are attributed to the current crisis.

Figure 5: Transfers from Stage 1 to Stage 2 justified by SICR overlays <sup>(31)</sup>



<sup>(31)</sup> This chart presents information for 40% of the institutions in the sample which reported an impact on transfers for at least one of the reference periods considered.

Figure 6: Percentage of transfers from Stage 1 to Stage 2 justified by SICR overlays per bank



32. Going back to the issue on the lack of collective assessment based on the top-down approach, for a relevant percentage of institutions in the sample it does not seem to be compensated for by the application of any type of overlays (see next Figure summarising the different pieces of information collected). This represents a potential point of attention to regulators and supervisors, as the information provided in the context of this exercise might suggest that not all the relevant factors and available information that could have indicated an increase in credit risk level of institutions' portfolios/financial instruments were duly incorporated into the SICR assessment process. While the use of overlays should assume, in general, a temporary nature, the urgency to find quick solutions to respond to the COVID-19 crisis would justify its use. Concerns on the use of overlays from a regulatory and supervisory perspective arise when overlays are used on a more permanent basis with no integration into the overall implemented process and related internal controls.

**Figure 7: Share of institutions using top-down approach for collective assessment and/or overlays**

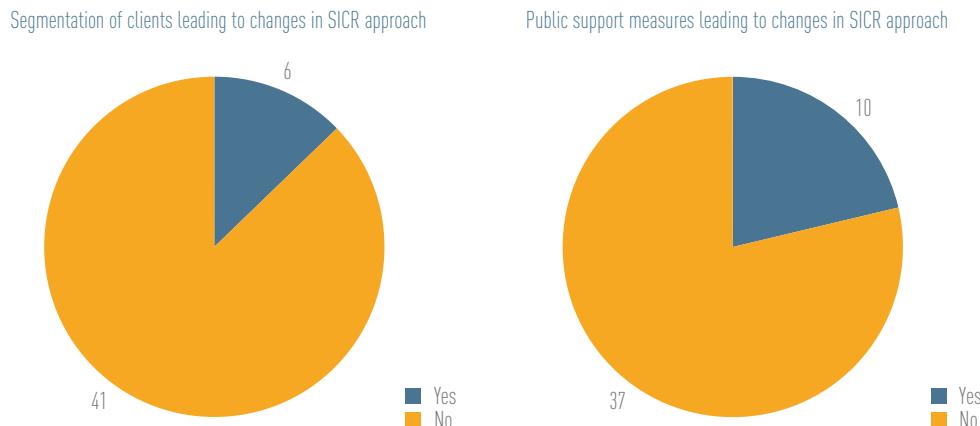
	No top-down approach for collective assessment	Top-down approach for collective assessment	Total
No overlays	38%	4%	42%
Overlays	47%	11%	58%
of which COVID	15%	4%	19%
Total	85%	15%	100%

33. In addition, it was noted that only a minority of institutions (13% of the sample) have changed the respective SICR approach to accommodate practices on the discrimination of the obligors under COVID-19 support measures. As is well known, the EBA's March Statement highlighted the need to distinguish tem-

porary liquidity constraints from real credit risk issues under which obligors would not be able to recover. Thirty-six percent of the institutions in the sample have mentioned that a case by case analysis is enough. While this approach might work well for some portfolios, it might not be sufficient or implementable for some others (for instance, retail). Other institutions in the sample (around 28%) have mentioned that the regular credit risk assessment continues to be performed. One point that remains to be answered when looking at these answers is how the specificities of such a crisis are being contemplated in those approaches. Some other institutions in the sample have mentioned the increased use of expert judgement or top-down approaches. A few institutions have mentioned having in place some specific procedures as, for instance, a flag system or a self-assessment questionnaire. While these specific procedures are, a priori, welcomed and desirable, they should be subject to further investigation from a supervisory perspective in order to assess whether the objectives behind their implementation are actually being achieved and all the relevant available information is being adequately used. A few other institutions have stated that discrimination of obligors is not being performed which clearly goes against the regulatory/supervisory expectation on this matter.

34. When looking at the changes that the implemented public support measures led to in terms of the SICR assessment (for 21% of the sample), the main points indicated by institutions relate to overlays and proper use of the forbearance definition as regards the staging process, following the guidance provided by the EBA on this aspect. One important aspect that should be highlighted from the answers provided is that 3 out of the 47 institutions have mentioned that the effects from these measures are indirectly embedded in the PD via their consideration in the revised macroeconomic projections. The following figures summarise the answers received.

**Figure 8: Changes to the overall SICR approaches: discrimination of obligors and public support measures**



35. While it is perfectly acknowledged that accounting standards are principle-based and can be applied in multiple forms, the current crisis scenario calls for stronger approaches adapted to the challenges faced and, in general, institutions are encouraged to continue putting some effort on this matter towards a global high quality implementation as already observed for some individual institutions in the sample. Follow-up activities and scrutiny from a supervisory perspective would certainly be needed to understand the extent to which the regulatory and supervisory expectations are being met on this relevant matter.

## 2.2. Transfers to Stage 2

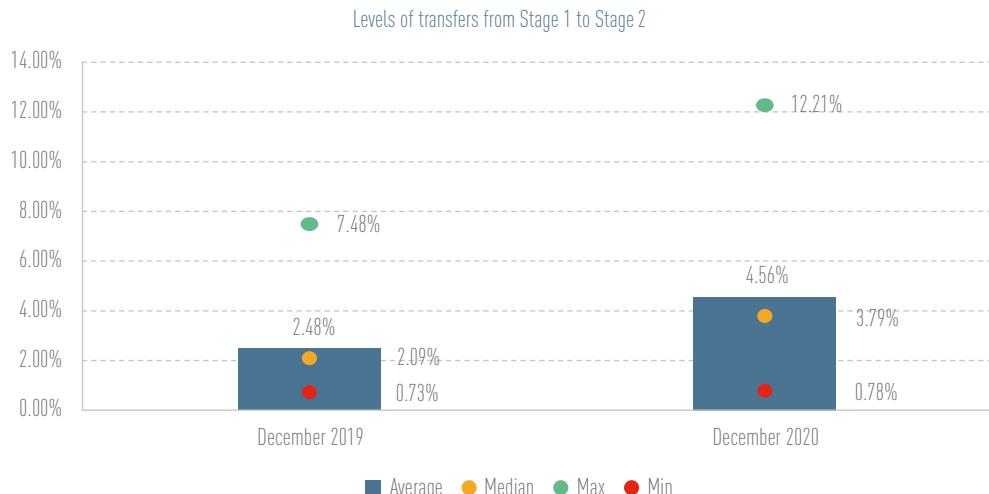
36. In order to have an overview on how the different practices described in the previous paragraphs could be affecting the lev-

el of transfers, supervisory data reported under FINREP was analysed using several IFRS 9 indicators [32]. In the next Figures, the evolution of the transfers from Stage 1 to Stage 2 between December 2019 and December 2020 is presented [33]. Not surprisingly, when comparing the two reference dates, an increase in the transfers to Stage 2 is observed. In addition, it is confirmed that institutions that were applying overlays and/or performing a SICR collective assessment in June 2020 have reported a higher level of transfers between December 2019 and December 2020.

[32] Developed for the purpose of the last EBA report published on the IFRS 9 monitoring activities. First observations on the impact and implementation of IFRS 9 by EU Institutions, December 2018 ([Link](#)). Further details on how EBA indicators are computed are published on the EBA website ([Link](#)).

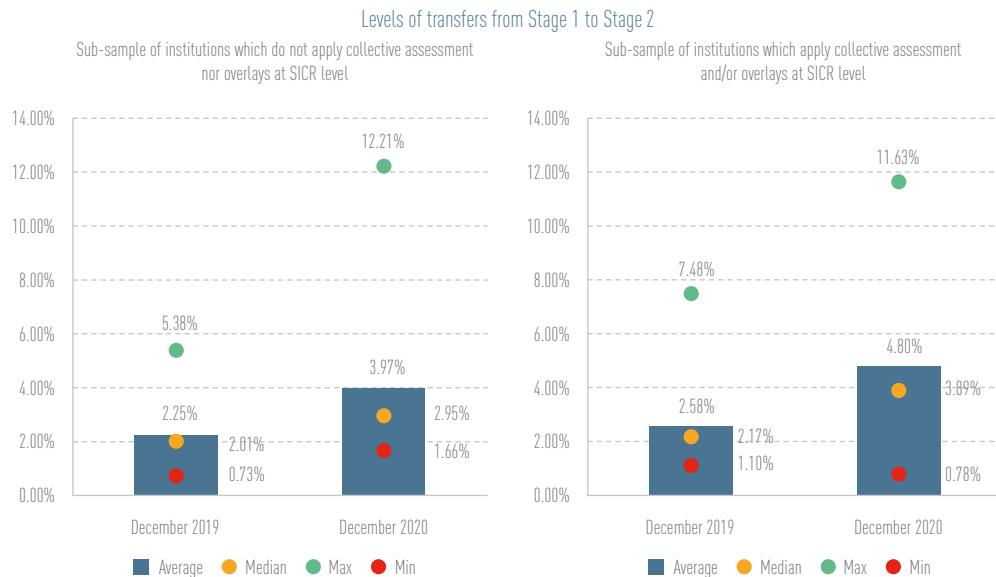
[33] Any discrepancy which might arise between the indicators presented in the report and those published in the EBA Risk Dashboard are due to differences in the samples considered.

**Figure 9: Total transfers from Stage 1 to Stage 2 [34]**



[34] Information provided for the full sample of 47 institutions. The averages considered for this set of charts are simple averages.

Figure 10: Total transfers from Stage 1 to Stage 2 for subgroups of institutions (December 2019 and December 2020) <sup>[35]</sup>



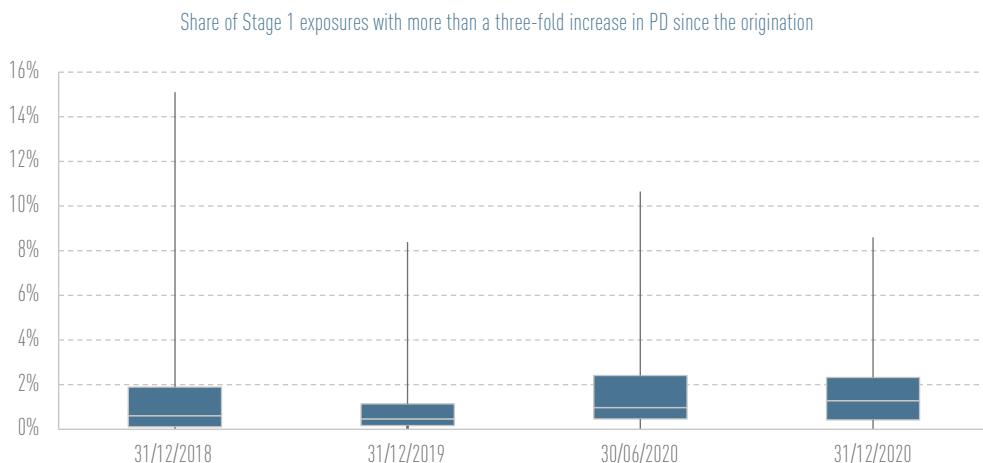
<sup>[35]</sup> Practices reported as of June 2020 were used to analyse IFRS 9 quantitative indicators as of December 2020. While this might represent some distortions (due to possible amendments in approaches during the second half of 2020), it was decided to present in this report the most recent available data (December 2020). For caution and completeness, the same type of analyses were conducted with June 2020 extrapolated data (instead of December 2020) and no material impacts in terms of the trends/conclusions presented in the report were identified.

37. Despite the increase observed in the Stage 2 transfers, when investigating more granular data for LDPs, based on the evidence collected via the second ad hoc exercise and the ITS on 2021 supervisory bench-

marking <sup>[36]</sup>, it seems that the share of exposures classified in Stage 1 with more than a threefold increase in PD since the origination increased during the pandemic, as presented in the next figure.

<sup>[36]</sup> Data collected at facility level for the 5 highest facilities in terms of exposure amount.

Figure 11: Comparison of the share of exposures classified in Stage 1 despite a threefold increase in PD since the origination <sup>[37]</sup>



<sup>[37]</sup> The previous Figure includes for each reference date (from December 2018 to December 2020) the data related to the first and third quartile, the median (bar line), and the maximum values reported by banks with reference to the share of exposures classified in Stage 1 despite a threefold increase in the PD. To note, the previous Figure is based on the data collected for the common sample of institutions that have been included in the quantitative analysis of the second ad hoc exercise and that have submitted the IFRS 9 templates in the context of the ITS on 2021 supervisory benchmarking. The bar line within the boxplots represents the median of the distribution.

## METHODOLOGY



## METHODOLOGICAL APPROACH

For the purpose of this analysis, the share of Stage 1 exposures with more than a threefold increase in PD has been calculated, by comparing i) the annualised lifetime PD at the reporting date and ii) the annualised lifetime PD at the origination<sup>(38)</sup>. To note, in order to take into consideration those cases of exposures presenting low absolute values of PD, despite the high increase recognised in relative terms, some filters have been introduced in the analysis with the aim of excluding those facilities that either:

- have been classified in Stage 1 as a consequence of the application of the low credit risk exemption, or;
- present an annualised lifetime PD<sup>(39)</sup> at the reporting date below 0.3%.

The aim of this analysis is to show the share of Stage 1 exposures that would have been moved to Stage 2, if a SICR threshold based on the threefold increase

<sup>(38)</sup> To note, for those institutions applying the 12-month PD as a proxy for the assessment of the significant increase in credit risk, such a comparison was performed on the basis of the data collected with reference to the 12-month PD at the origination and at the reporting date.

<sup>(39)</sup> Or a 12-month PD, in those cases where the latter has been used as a proxy for the assessment of the significant increase in credit risk.

in PD since the origination<sup>(40)</sup> were applied. It is worth recalling that:

- the analysis is based only on a subset of the exposures toward the counterparties listed by the EBA, since, in order to reduce the burden of the data collection, institutions were asked to report for each counterparty at most the five facilities with the highest exposure amount;
- the outcome of the analysis is affected by the heterogeneity of practices observed for determining the PD threshold associated with the application of the low credit risk exemption (see below). Indeed, whereas if the banks' assumptions on the low credit risk exemption were replaced by the application of a common PD threshold (e.g. annualised lifetime PD at the reporting date below 0.3%), approximately one third of the banks in the sample would present a significantly higher share of exposures to be potentially transferred to Stage 2.

<sup>(40)</sup> To note, whilst IFRS 9 does not prescribe a specific quantitative PD threshold triggering the transfer to Stage 2, for the purpose of this analysis, consideration has been given to those cases where a threefold increase in PD has occurred since the origination, in line with the methodological approach used in the 2021 stress test exercise. In this context, a threefold increase in PD is intended as an increase of 200% of the initial PD (i.e.  $(1+200\%) \times \text{initial PD}$ ) (see EU 2021 Wide-Stress Test Methodological Note).

38. While this outcome reflects the worsening in the credit quality of banks' portfolios resulting from the COVID-19 crisis, such an evidence also reinforces the concerns expressed in the previous section of the report<sup>(41)</sup> on whether the practices adopted by banks in these extraordinary circumstances effectively lead to a timely transfer of exposures to Stage 2. In this regard, even though the information available does not allow an assessment of the impact stemming from this observation on the amount of ECL, a delay in the transfer to Stage 2 may significantly affect the ECL measurement, since for

those exposures classified in Stage 2 a lifetime ECL is recognised instead of a 12-month ECL<sup>(42)</sup>.

39. It is interesting to note that the trend observed in Figure 11, is generally associated with banks adopting practices for the SICR assessment that deserve further scrutiny from a supervisory perspective, since they are based either on:

- A combination of absolute and relative thresholds with both criteria that need to be met to trigger a transfer to Stage 2. In this regard, it is recalled

<sup>(41)</sup> Please see Sub-section 2.1.

<sup>(42)</sup> The same consideration is valid also for the purpose of the observations on the low credit risk exemption illustrated in Sub-section 2.5 of this report.

- that stage transfer triggers defined in absolute terms (either as an absolute PD level or an absolute PD increase) are generally not in line with IFRS 9<sup>[43]</sup>; or
- SICR thresholds determined based on a 'quantile approach'<sup>[44]</sup>. Indeed, for portfolios with higher volatility in credit risk this approach, for a selected quantile of the distribution, mechanically leads to higher relative thresholds than for less volatile portfolios. Moreover, significant differences have been observed in the calibration of the quantile of the distribution used for determining the thresholds for the Stage 2 transfer. If this approach is applied, it is of utmost importance that the criteria for the calibration of the quantile do not lead to higher thresholds than those that would normally result from the application of other approaches as, for instance, when using a multiple PD type of approach<sup>[45]</sup> in order to ensure that the related quantitative threshold does not result in a delay of transfers to Stage 2. In the light of the above, this approach should lead to a higher level of scrutiny.
40. In addition, while some institutions referred to have revised their SICR thresholds in 2020 in order to reflect the effects of the COVID-19 crisis, they still presented in June 2020 a high share of exposures with more than a threefold increase in PD classified in Stage 1, in comparison to the other banks in the sample. Furthermore, whilst almost all of them reported using manual adjustments, the portion
- of exposures of the common LDP sample kept in Stage 1 as a result of these adjustments was quite limited<sup>[46]</sup>. This confirms that the pattern observed is mainly affected by the practices used for the purpose of the SICR assessment rather than by the application of manual adjustments to keep exposures in Stage 1.
41. Regarding direct transfers from Stage 1 to Stage 3 (or in less than 3 months), the level does not seem to have materially increased from December 2018 to June 2020<sup>[47]</sup>. It might, however, be too early to identify significant trends and these observations could be different in the medium term justifying the need for continuous monitoring. To recall, this metric assumes relevance when assessing the quality of implemented SICR approaches. While there might be other individual factors explaining it, an increase in the direct transfers from Stage 1 to Stage 3 might also indicate the presence of material weaknesses in the SICR assessment methodologies. For this reason, this metric should be assessed on a continuous basis.
42. Finally, the evolution of the distribution of credit risk allowances per stage has been analysed. While in a year-over-year (YoY) comparison between December 2018<sup>[48]</sup> and December 2019 some mild fluctuations were observed for all stages, the year 2020 brought many more significant changes. For December 2020 reference date, allowances to Stage 2 exposures became more representative and a significant decline was observed in the representativeness of Stage 3 allowances in terms of the total ECL amount.

<sup>[43]</sup> According to IFRS 9.B5.5.9, when determining the significance of an increase in the credit risk, 'a given change, in absolute terms [...] will be more significant for a financial instrument with a lower initial risk [...] compared to a financial instrument with a higher initial risk [...]. Unless all instruments to which an absolute trigger is applied share the same initial risk or the instruments still benefit from the low credit risk exemption, an absolute increase in PD is not suitable to determine the significance'.

<sup>[44]</sup> For the purpose of this report, the term 'quantile approach' is intended as any approach based on a comparison between the PD at the reporting date and the PD of an x% quantile of the forward probability distribution of changes in PD, based on the risk assessment at initial recognition. An example of a PD quantile approach is provided below:

- the institution collects historical data on relative changes in PDs (either lifetime PDs or 12-month PDs) at instrument level. Those historical data constitute a distribution based on which it could be assessed how frequently a certain relative change in the risk of default since origination was observed.
- the institution statistically identifies a X% quantile of this distribution. The relative change in PD corresponding to the X% quantile of the distribution represents the quantitative threshold for SICR.

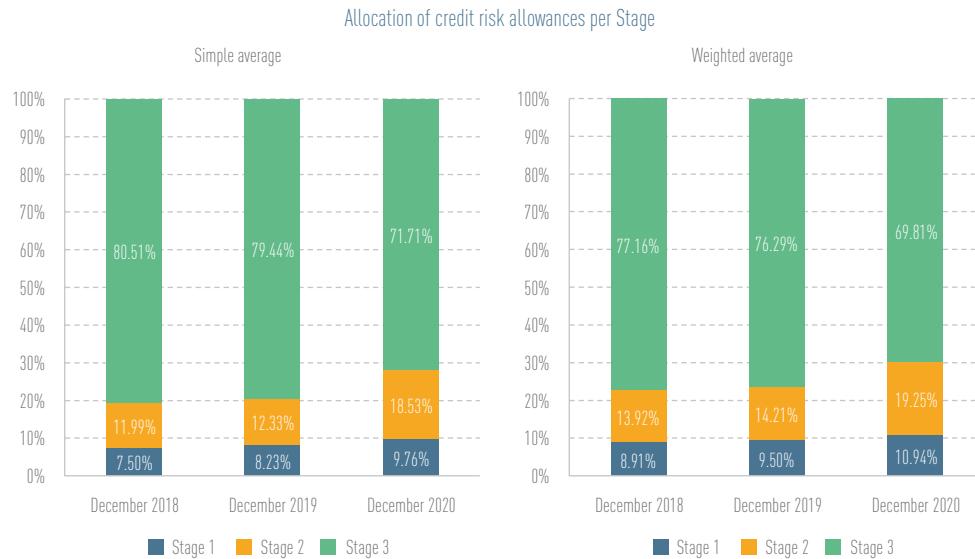
<sup>[45]</sup> Where the change in PD is defined as a multiple of the initial PD.

<sup>[46]</sup> Generally the proportion of instruments kept in Stage 1 was below 1% of the total value of the financial instruments of the LDP classified in Stage 1. For the sake of completeness, it is worth noting that, among those institutions participating in the second ad hoc exercise only one bank reported a significant amount of instruments kept in Stage 1 due to manual adjustments (87% in the 1H 2020). However, this institution was filtered out from the sample of the quantitative analyses due to some data quality issues identified in the data submitted.

<sup>[47]</sup> Information collected through the qualitative questionnaire developed for the purpose of this exercise and not via FINREP.

<sup>[48]</sup> In line with the observations as of June 2018 as presented in the EBA report published in December 2018.

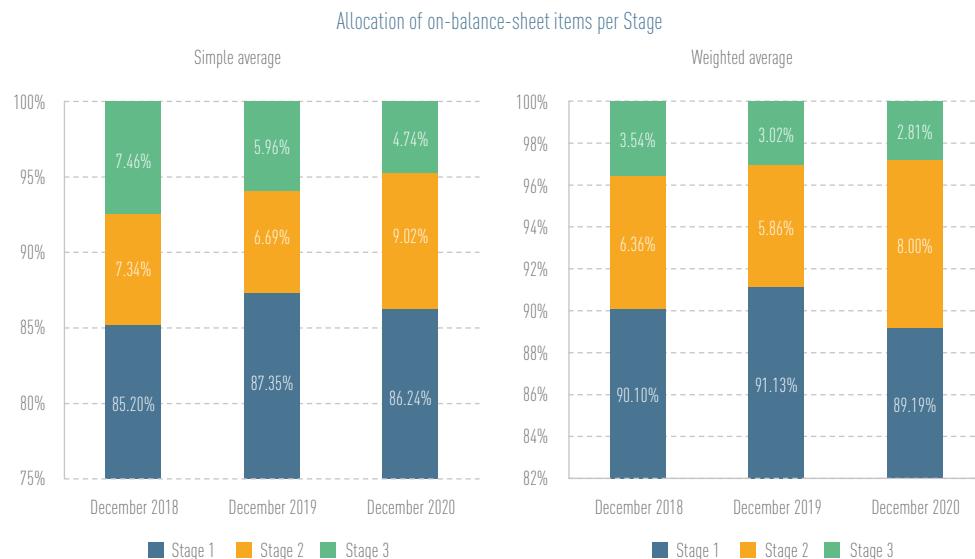
Figure 12: Allocation of credit risk allowance per stage



43. Other important metrics which have been monitored are levels of allocations of on-balance-sheet items per stage. While some slight fluctuations on these levels were observed between December 2018 <sup>[49]</sup> and December 2019 reference dates, December 2020 data presents the biggest variation observed since the first

implementation of IFRS 9. What is particularly relevant to highlight is a material increase of Stage 2 allocations with a simultaneous decline in both Stage 1 and Stage 3 allocations in year 2020. This observation is also aligned with the increase in the proportion of Stage 2 credit risk allowances (please see previous paragraph).

Figure 13: Allocation of on-balance-sheet items per stage

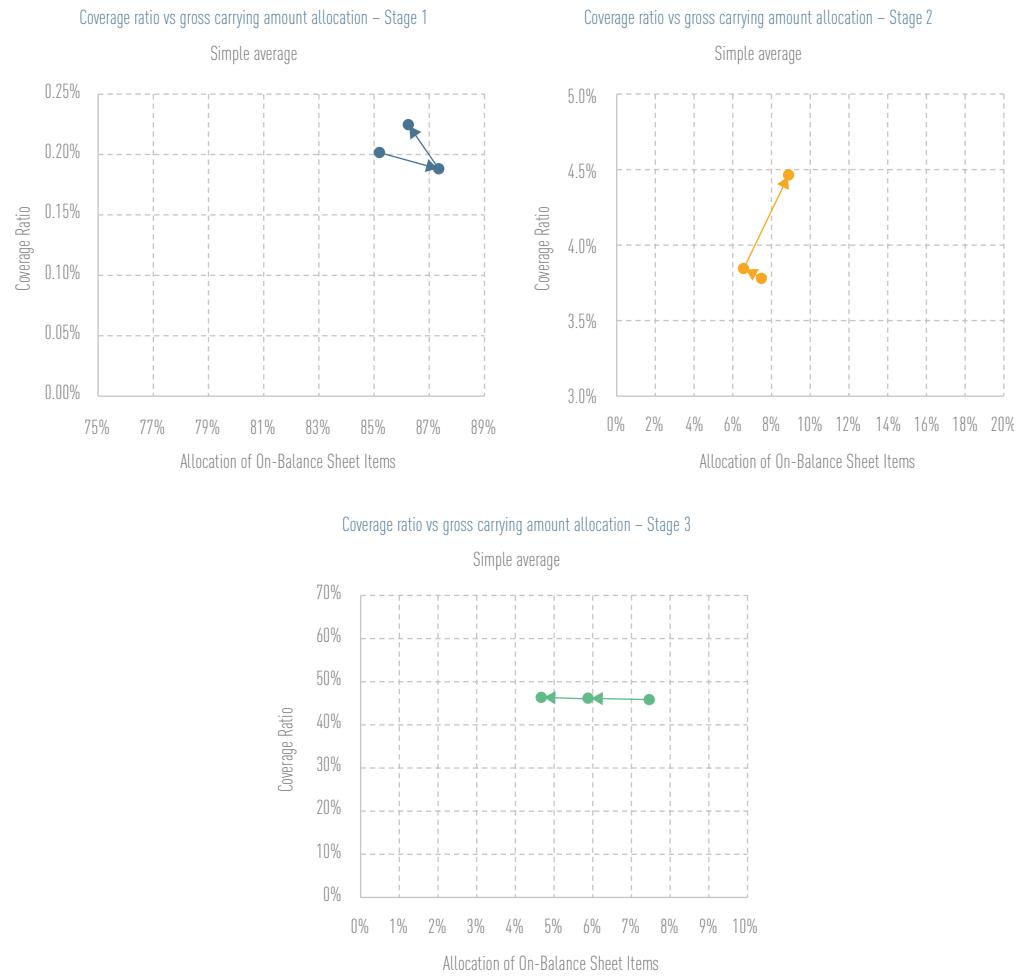


44. Finally, Figure 14 depicts the evolution of the coverage ratio per stage between December 2018, December 2019 and December 2020. In a nutshell, while an

increase in the coverage ratio has been observed for Stage 1 and Stage 2 exposures, for Stage 3 its levels remain stable between these reference dates.

<sup>[49]</sup> In line with the observations as of June 2018 as presented in the EBA report published in December 2018.

Figure 14: Evolution of coverage ratio for all the stages of impairment (simple average)



## 2.3. Alignment between the Definition of Default (DoD) and IFRS 9 exposures in Stage 3

MORE INFO



### WHAT DOES IFRS 9 SAY ABOUT THE DEFINITION OF DEFAULT AND WHAT DO THE EBA GUIDELINES ON DEFINITION OF DEFAULT FOR REGULATORY PURPOSES SAY ?

IFRS 9 does not define 'default', since institutions are required to develop an internal definition that is consistent with the one used for internal credit risk management purposes. Qualitative and quantitative indicators can be considered.

The EBA Guidelines on credit institutions' credit risk management practices and accounting for expected credit losses<sup>[50]</sup> (hereafter 'EBA Guidelines on ECL') state that when adopting a definition of default for accounting purposes, credit institutions should be guided by the definition used for regulatory purposes provided in Article 178 of Regulation (EU) 575/2013.

From the prudential perspective, recent changes were introduced to the EBA

<sup>[50]</sup> EBA/GL/2017/06.

Guidelines<sup>[51]</sup>, applicable from 1 January 2021, stating that an exposure is qualified as a defaulted exposure if the forbearance results in more than 1% loss of the current value of the exposure. In light of the COVID-19 crisis, specific guidance on moratoria aims at avoiding any automatic classification in forbearance, and thus, in default. Moreover, the days-past-due (DPD) criteria should be examined after the moratoria being granted in order to avoid that the moratoria itself leads to a forbearance status<sup>[52]</sup>.

<sup>[51]</sup> Final Report on Guidelines on the definition of default under Article 178 of Regulation (EU) No 575/2013 (EBA-GL-2016-07).

<sup>[52]</sup> For further guidance, please refer to Guidelines on legislative and non-legislative moratoria on loan repayments applied in light of the COVID-19 crisis | European Banking Authority (europa.eu).

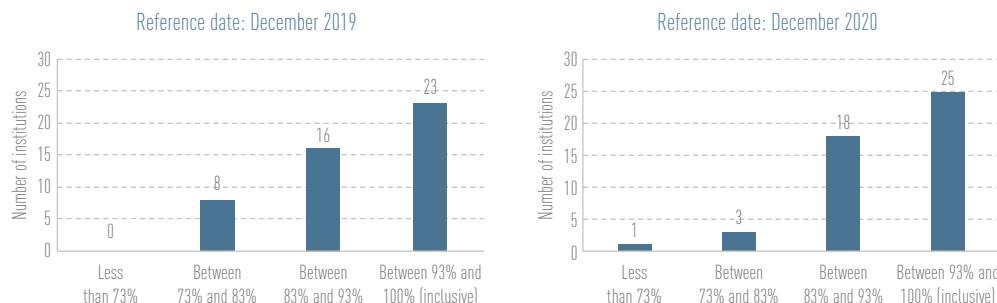
- 45. With regard to the definitions of default, in overall terms, a good alignment between accounting and regulatory definitions continues to be observed as already concluded in the first IFRS 9 post-implementation report published by the EBA in December 2018. Despite the specific measures put in place as a response to the COVID-19 crisis, institutions should continue to perform an appropriate analysis to assess the unlikelihood to pay criteria.
- 46. Even though there are differences between the non-performing loans concept<sup>[53]</sup>, the prudential definition of default<sup>[54]</sup> and the concept of credit-impaired financial asset (Stage 3 under IFRS 9), in practice, it is observed that institutions tend to converge or try to achieve full

alignment of the three definitions. When looking at the IFRS 9 indicators (FINREP data) focusing on the non-performing exposures allocated to Stage 3, as of December 2020, more than half of institutions reported that they classify between 93% and 100% of non-performing assets in Stage 3. When asked about the main reasons to have a total amount of stage 3 exposures less than 95% of the total amount of non-performing exposures, the most common answers provided by institutions were the following: (i) cure period forborne exposure shorter than the one in the ITS; and (ii) usage of a 'transaction approach' for accounting purposes while using a pulling effect for non-performing exposures.

<sup>[53]</sup> Article 47a, CRR2.

<sup>[54]</sup> Article 178, CRR2 and EBA Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013.

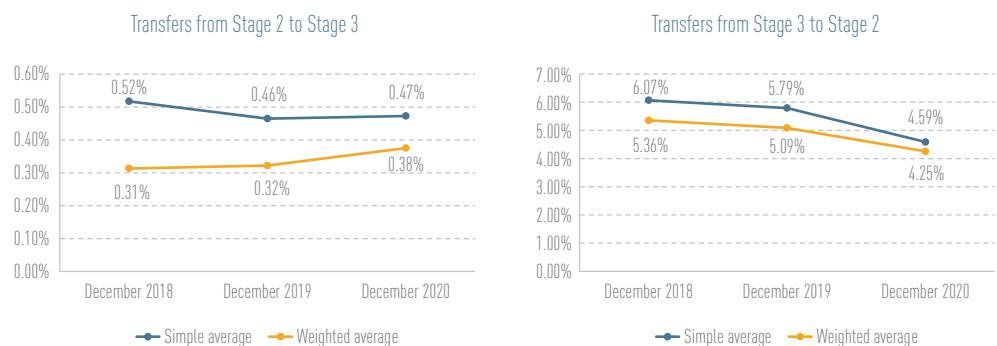
**Figure 15: Non-performing exposures allocated to IFRS 9 Stage 3**  
Non-performing exposures allocated to Stage 3



47. Regarding the definition of default indicators triggering transfers to Stage 3, 23% of the institutions indicated that they have already adopted and fully aligned the definition of default with the EBA guidelines as regards the unlikelihood-to-pay criteria or are in the process of doing so.
48. Moreover, with regard to the movements from Stage 2 to Stage 3, data gathered through the IFRS 9 indicators (FINREP data) show low and stable levels of these transfers observed consistently from December 2018 to December 2020. More dynamics are noted when looking at the movements

in the opposite direction. When comparing the levels of transfers from Stage 3 to Stage 2 between December 2018 and December 2019, a slight decrease is observed. This trend is continued with an even higher magnitude when comparing December 2019 and December 2020 data. No specific concerns or points of attention to supervisors were identified as a result of this data analysis. As regards movements from Stage 3 to Stage 1, after a moderate decrease between December 2018 and December 2019, they remained relatively stable between December 2019 and December 2020.

**Figure 16: Transfers from S2 to S3 and transfers back from S3 to S2**



## 2.4. SICR approach validation and key metrics used for monitoring

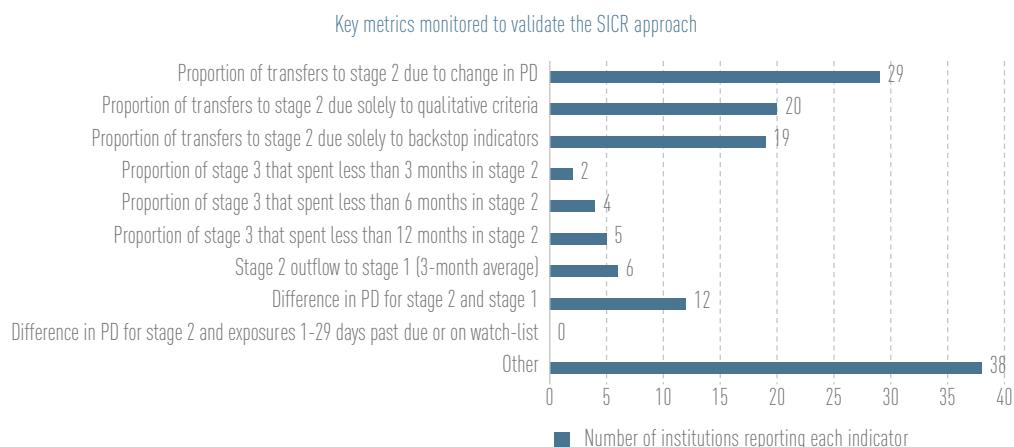
49. As stated in the EBA Guidelines on ECL, 'credit institution's management body should be responsible for approving and regularly reviewing a credit institution's credit risk management strategy and the main policies and processes for identifying, measuring, evaluating, monitoring, reporting and mitigating credit risk consistent with the approved risk appetite set by the management body' [55].
  50. Regarding the frequency of validation processes, it was observed that for the vast
- majority of the institutions, the validation of the SICR approach is mainly performed on a yearly basis or higher frequency. In the current context of uncertainty and quick evolution as we saw with the COVID-19 crisis, this higher frequency, even if on a temporary basis, would be seen as more appropriate in order to adjust the implemented approaches or perform the necessary manual adjustments in due time.
51. As regards the key metrics considered to validate the SICR approach, institutions mainly monitored the proportion of transfers to Stage 2 due to a change in the PD (60% of the sample), due to solely qualitative criteria (42% of the sample) and due to solely backstop indicators (40% of the sample). A multiplicity of other metrics were implemented by institutions such

[55] See paragraph 25 of the EBA Guidelines on ECL.

as, for instance, (i) direct transfers from Stage 1 to Stage 3; (ii) stability of allocation per stage and ‘parking’ time in Stage 2; (iii) differences in the PD level when comparing Stage 1 and Stage 2 exposures. Overall, it seems that the key metrics considered by institutions are adequate. In case of any metrics being calibrated in a way that is not considered adequate, it would deserve additional investigation and scrutiny from a supervisory perspective (typically, it could happen with those metrics

limiting variability in the allocation per stage). However, it should be noted that a robust validation process requires a proper implementation of such metrics as, for instance, the definition of reasonable thresholds. Institutions should continue to rely on a comprehensive set of key metrics as the one reported and presented in Figure 17, not minimising the efforts needed when defining the triggers that would actually lead to a review of the SICR approach.

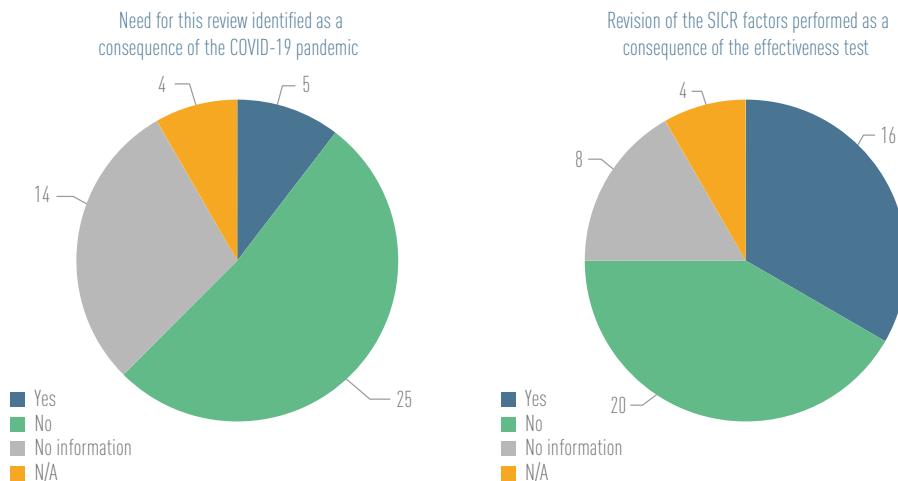
Figure 17: Key metrics to validate SICR assessment approach



52. Furthermore, the majority of institutions have stated that there is no need to review the SICR factors considered in the respective assessment as a consequence of the COVID-19 pandemic (52% of the sample), with only 10% of the sample mentioning that this review was actually needed. As regards the results of the regular effectiveness tests conducted, 33% of the sample reviewed the SICR factors as a conse-

quence of it. Having in mind the aspects previously presented in relation to the lack of changes observed in terms of the overall SICR approach, these are not surprising results. As mentioned before, institutions are strongly encouraged to review whether the implemented processes and approaches are flexible and comprehensive enough to adequately capture SICR situations in a scenario such as the COVID-19 one.

Figure 18: Consequences of the impact from the COVID-19 pandemic and effectiveness tests performed on the staging process<sup>[56]</sup>



<sup>[56]</sup> To note: ‘N/A’ corresponds to those institutions which reported that the effectiveness of the staging process was not tested. ‘No information’ was indicated for those institutions which did not provide any answer.

## 2.5. Application of the low credit risk exemption

MORE INFO



### WHAT IS THE APPLICATION OF THE LOW CREDIT RISK EXEMPTION (LCRE) AND 12-MONTH PD AS A PROXY FOR THE LIFETIME PD?

IFRS 9 allows the assumption, without further analysis, that the credit risk on a financial instrument has not increased significantly since initial recognition if it is determined to have low credit risk at the reporting date.<sup>[57]</sup> In this context, an external rating of 'investment grade' is indicated as an example of a financial instrument that may be considered as having low credit risk. The standard<sup>[58]</sup> also clarifies that to determine whether a financial instrument has low credit risk an entity may use its internal credit risk ratings or other methodologies that are consistent with a globally understood definition of low credit risk. Although, as stated in the standard, financial instruments are not required to be externally rated to be considered to have low credit risk, they should be considered to have low credit risk from a market participant perspective taking into account all of the terms and conditions of the financial instrument.

As indicated in the EBA Guidelines on ECL<sup>[59]</sup>, the regulatory/supervisory ex-

pectation is that this exemption is used in a limited manner. As specified in paragraph 134 of the EBA Guidelines on ECL, 'lending exposures that have an investment-grade rating from a credit rating agency cannot automatically be considered low credit risk. Credit institutions should rely primarily on their own credit risk assessments in order to evaluate the credit risk of a lending exposure, and not rely solely or mechanistically on ratings provided by credit rating agencies (where the latter are available).' The reasons behind this expectation are clear: if SICR assessment is not to be conducted, the level of certainty on the low credit risk level of those exposures should be high and the decision on which exposures are to be covered needs to be well supported and documented.

As a simplification to its requirements, IFRS 9 allows institutions to, in some cases, assess SICR by considering changes in the 12-month PD instead of the lifetime PD. This is an acceptable approach only when institutions are able to demonstrate that the use of a 12-month PD is a reasonable approximation of the changes in the lifetime risk of a default occurring.

53. The use of the IFRS 9 low credit risk exemption<sup>[60]</sup> by banks appears to be, for a few institutions, excessive, especially when taking into account the regulatory and supervisory expectations that were set on this matter<sup>[61]</sup>. More than a half of the institutions in the sample make use of this LCRE, in particular for certain

portfolios. Surprisingly, a few institutions have made use of this exemption in several portfolios (3 or more portfolios out of the 6 under analysis). Some of these portfolios, as presented in the following charts, correspond to loans and advances to households and non-financial corporations (other than Large corporates).

<sup>[57]</sup> IFRS 9, paragraph 5.5.10.

<sup>[58]</sup> Please see EBA Guidelines on ECL.

Figure 19: Application of the LCRE by institutions in the sample

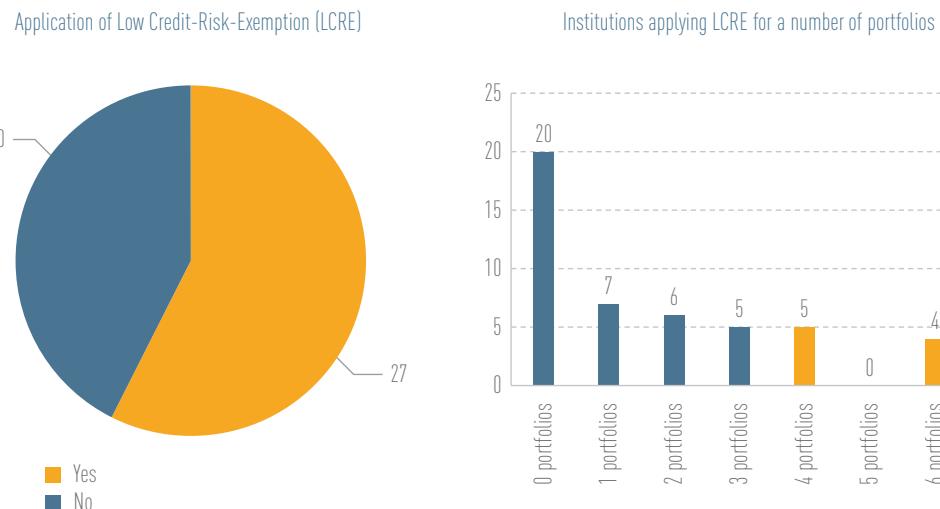
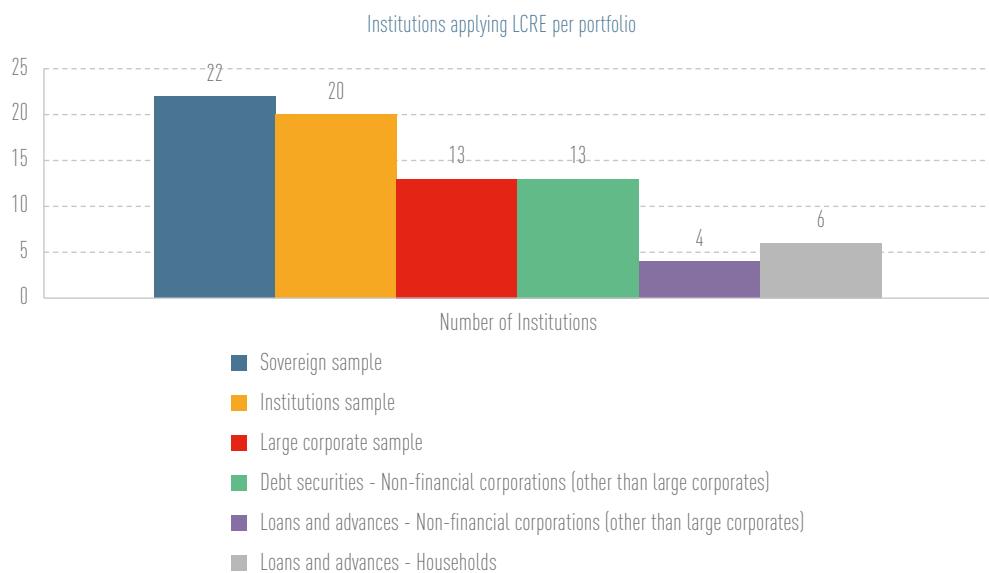
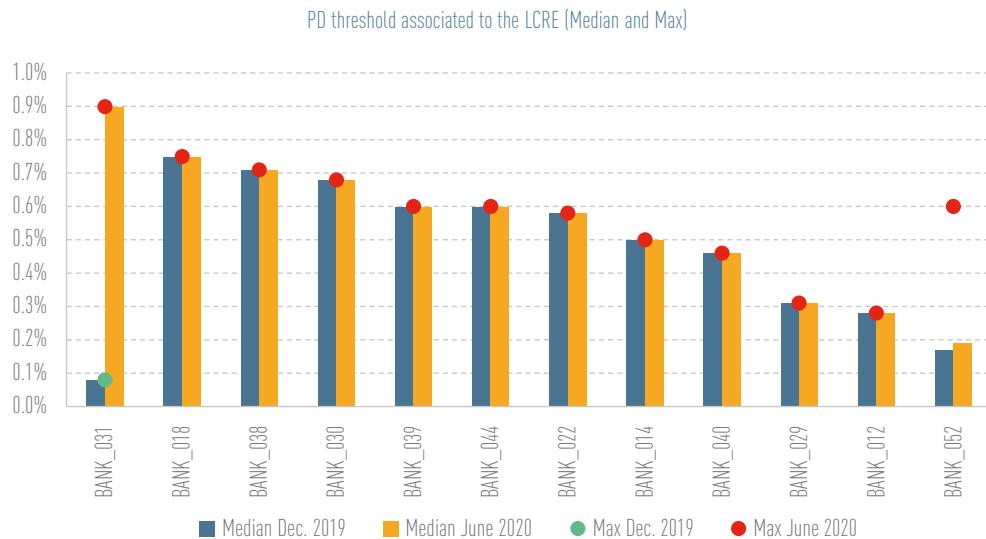


Figure 20: Number of institutions applying the LCRE per portfolio



54. The observations based on the sample of banks included in the quantitative analyses of the second ad-hoc exercise, confirm the adoption of different practices across EU institutions as regards the PD level determining which exposures would be under the LCRE (Figure 21). This lack of harmonisation affects, inter alia, the SICR assessment. Indeed, significantly high thresholds could result in a delay in the

Stage 2 transfer, especially for those institutions, where the low credit risk exemption is widely applied. Moreover, while the PD threshold associated with the LCRE was generally constant for the facilities submitted, for one bank in the sample, a change was observed in such a threshold between December 2019 and June 2020.

Figure 21: PD threshold<sup>[62]</sup> associated with the LCRE for Stage 1 exposures<sup>[63]</sup>

<sup>[62]</sup> Intended as the annualised lifetime PD level, below which the financial instrument is considered to have a low risk of default or the 12-month PD below which the financial instrument is considered to have a low risk of default, where the 12-month PD is used as a proxy for the application of the low credit risk exemption.

<sup>[63]</sup> Figure based on the data collected via the quantitative templates of the second ad hoc exercise.

## 2.6. Use of 12-month PD as a proxy for the lifetime PD

55. The 12-month PD as a proxy for the lifetime PD is used by 40% of the sample for the purposes of the SICR assessment. Out of these institutions, 63% stressed a similar outcome or a high correlation between the two metrics. However, there are some concerns as regards the rationale followed by a few institutions in the sample when deciding to use a 12-month PD instead of the lifetime one. Those explanations were as follows:
- i. Lifetime PDs are not available for exposures existing before the first application of IFRS 9.
  - ii. The 12-month PD is the best estimate of the quality of an exposure at origination.
56. Neither of the above explanations is seen as a best practice in terms of an underlying rationale to apply this simplifica-

tion. Under IFRS 9, such an approach should be considered when changes in the 12-month PD correspond to a reasonable approximation to what these changes would be when considering the lifetime risk of a default occurring. Institutions following a different rationale are encouraged to review their practices in order to follow the spirit of the standard when allowing the application of such a simplified approach. The treatment of exposures when information at origination is not available might also be reviewed in order to follow IFRS 9 requirements on this matter. In this context, it is worth recalling that, at initial application of IFRS 9, when determining whether there has been a significant increase in credit risk since initial recognition would require undue cost or effort, the ECL should be measured on a lifetime basis until the financial instrument is derecognised (unless this financial instrument is under the LCRE at the reporting date) <sup>[64]</sup>.

<sup>[64]</sup> Please see IFRS 9, paragraph 7.2.20.

### 3. Expected Credit Loss Models

#### KEY TAKEAWAYS



#### KEY TAKEAWAYS OF THIS SECTION

Almost all institutions in the sample use an EAD\*PD\*LGD approach to measure ECL. Since the first application of IFRS 9, institutions have reported some adjustments being made to ECL models. When assessing the significance of those changes, the majority of institutions would classify them as 'recalibration' or 'significant change'.

As it is already well known, the COVID-19 pandemic resulted in extraordinary circumstances, which pushed models outside of their ordinary working hypothesis. In light of this, some institutions introduced some post-model adjustments/overlays either at the level of the IFRS 9 risk parameter (e.g. PD, LGD and/or EAD) or directly at the level of the final ECL amount. While for loans and advances portfolios this seems to be a widely implemented practice, the same is not necessarily valid for sovereign or institutions portfolios.

When looking at the impact on the final ECL amount produced by the COVID-19 pandemic, a significant divergence in the materiality of the results obtained as of June 2020 for the different institutions was observed. Around 1/5 of the institutions reported a COVID-19 impact higher than 50% of the final ECL number. On the contrary, almost half of the institutions have mentioned that this impact was lower than 20%.

As regards the use of overlays when measuring ECL, it was noted that those already being considered by institutions as of December 2019 remained relatively constant between this date and June 2020. Those overlays that were added during the first half of 2020 relate almost exclusively to the COVID-19 pandemic, which is not surprising.

When assessing the information provided on the rationale behind the definition of overlays to be applied when measuring ECL, it was noted that most of the institutions did not rely on internal analyses (giving due consideration to the internal stress test results as well) which was, to some extent, surprising.

When analysing the nature of the implemented overlays, it was observed that while the use of permanent (sometimes complemented by temporary) overlays is rather limited and stayed mostly constant between 2019 and 2020, a significant increase in the use of temporary overlays took place for 2020. In terms of materiality of those overlays in the final ECL number, it was observed that overlays with a material impact existed already in 2019. Overlays can assume a material impact in terms of the final ECL number and, as such, should be seen as a key area for regulatory and supervisory monitoring. Understanding the model deficiencies and why the use of this practice continues to be verified over time is an aspect of utmost importance. Good governance measures around the application of overlays are crucial.

Going forward, it would be of utmost importance to continue monitoring the use of overlays from institutions, in order to investigate whether and to what extent banks intend to adjust their ECL models in order to incorporate the effects now considered via overlays or if some types of overlays will be kept in the future, despite their expected temporary nature. In this regard, as indicated in the EBA Guidelines on ECL, adjustments to allowances are expected to be used as an interim solution and should not be continuously used over the long term for a non-transitional risk factor.

In the context of the pandemic situation, it was also observed that effects of the COVID-19 crisis (and in particular public support measures) are modelled in a very heterogeneous manner (incorporation in the PD, or in the LGD, via post-model adjustments in the final ECL, or not captured). Also, some diversity in practices was observed as regards the treatment of government guarantees (while in some cases it is considered an integral part of the contractual terms, in some other cas-

es these guarantees are recognised separately).

On the prudential figures computation, an increase in the reported IRB surplus and a decrease in the reported IRB shortfall were finally observed when comparing December 2020 with previous reference dates. This trend is consistent with the observations presented in this report as regards the general increase of the average coverage ratios.

### 3.1. Type of Expected Credit Loss (ECL) models

MORE INFO



#### WHAT ARE EXPECTED CREDIT LOSS MODELS UNDER IFRS 9?

IFRS 9 does not prescribe the use of a specific approach for determining the expected credit losses. As such, institutions may follow different approaches when calculating ECL. An institution may follow a direct ECL modelling, another institution may follow a standard  $EAD \cdot PD \cdot LGD$  and yet another institution may follow a different model (for example:  $[EAD \cdot PD \cdot (1-CR)] \cdot LGL$ , where CR is intended as the cure rate and LGL is the loss observed in case of a non-cured default (i.e. the loss given a positive loss)). Moreover, within the same institution, different practices might be followed for different portfolios or exposure classes and these different modelling approaches across different institutions and/or portfolios can still be fully aligned

with the standard<sup>(65)</sup>. In addition, even in those cases where the ECL parameters are the same across institutions and portfolios, the definitions of the risk parameters may not be identical across institutions<sup>(66)</sup>, in contrast to the prudential definitions and calculation methodologies for credit risk prescribed in Regulation (EU) No 575/2013 (CRR). Therefore, when reading the ECL-related sections in this report, it is important to consider this caveat when interpreting any trends and/or conclusions

<sup>(65)</sup> Please see IFRS 9, paragraph 5.5.17.

<sup>(66)</sup> For instance, an institution might have a PD computed based on number-weighted default rates (DRs) while another institution might have a PD computed based on EAD-weighted DRs that is implicitly capturing the EAD evolution.

- 57. The very vast majority of institutions in the sample implemented an  $EAD \cdot PD \cdot LGD$  model. Even for the very few ones using a different approach (for instance, using a probability of loss), the  $EAD \cdot PD \cdot LGD$  approach might still be applied for certain portfolios.
- 58. Overall, it can be concluded that almost all institutions use an  $EAD \cdot PD \cdot LGD$  approach to measure ECL. Only one institution modified the formula more significantly. In addition, as further explained in the following section, some differences have been observed among IRB banks on the degree to which IRB models are used for determining the IFRS 9 risk parameters (e.g. the IFRS 9 PD).

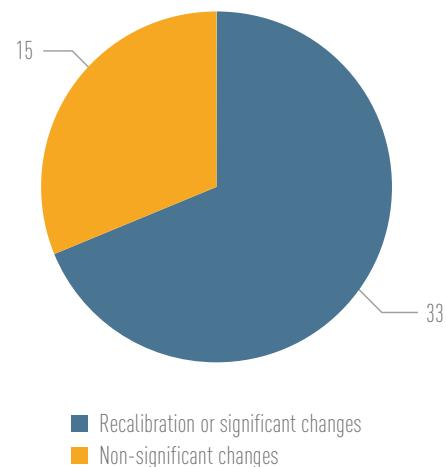
### 3.2. Impact of COVID-19 on ECL models

59. Since the first application of IFRS 9, some adjustments were performed to the ECL models ranging from non-significant changes (31% of the institutions) to recalibration/significant changes (69% of the institutions). Below, the nature of the recalibrations/significant changes performed by some of the institutions is presented:

- 38% of the institutions in the sample have stated that a recalibration of the models was performed, in some cases following the results of the validation processes / back-testing;
- 10% of the institutions in the sample have redesigned or redeveloped their models due to the severity of the deficiencies identified; and
- 8% of the institutions in the sample mentioned that the significant changes/recalibrations were linked to COVID-19 impacts. These changes were introduced, inter alia, to:
  - i. incorporate accurate macroeconomic scenarios;
  - ii. recalibrate credit cycle models;
  - iii. incorporate sector information.

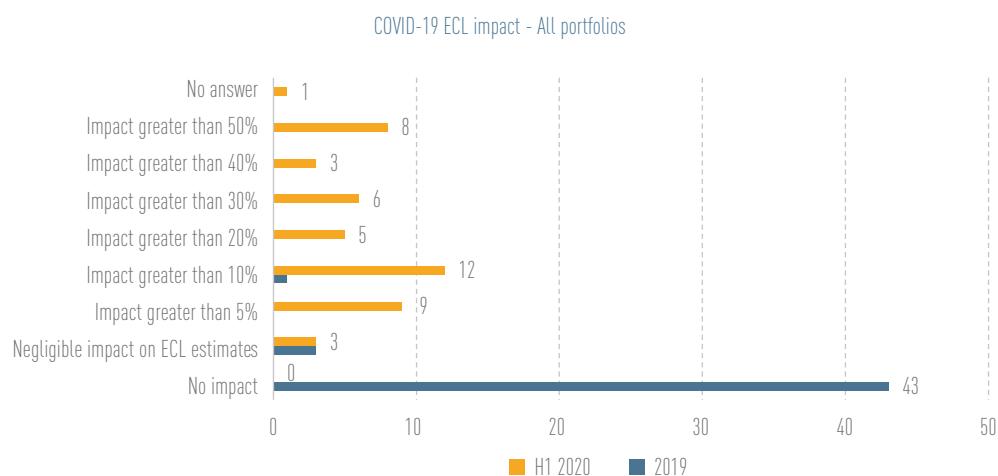
Figure 22: Adjustments performed to ECL models

Categories of adjustments performed to IFRS 9 models since the first time application



60. Significant divergence can be found in the results on the materiality of the impact of COVID-19 pandemic in the final ECL amount. Later in this report, additional detailed information is provided on the overlays considered by institutions to reflect the impact of the COVID-19 crisis in their final ECL amount.
61. As it can be retrieved from the next Figure, a bit less than one-fifth of the institutions reported a COVID-19 impact higher than 50% of the final ECL number. Almost half of the institutions have mentioned that this impact was higher than 20%.

Figure 23: COVID-19 impact on the final ECL amount



### 3.3. Model limitations and use of overlays

MORE INFO



#### WHAT ARE OVERLAYS?

For the purposes of this report, overlays / manual adjustments / interventions (hereinafter, overlays) refer to any kind of adjustment that limits the degree of automation of the implemented models (for instance, when incorporating a single non-recurring event into the ECL measurement process).

EBA Guidelines on ECL mention that 'credit institutions should use temporary adjustments to an allowance only as an interim solution, in particular in transient circumstances or when there is insufficient time to appropriately incorporate relevant new information into the existing credit risk rating and modelling process'. It is also indicated that such adjustments should not be continuously used over the long term for a non-transient risk factor.

From a regulatory and supervisory perspective, credit risk factors should be incorporated in a timely way into models, unless doing so requires a disproportionate and non-justified effort. Institutions are encouraged to identify model limitations in a timely manner and minimise the length of time of temporary overlays. As also mentioned in the EBA Guidelines on the ECL, 'the use of temporary adjustments requires the application of significant judgement and creates the poten-

tial for bias. [...] temporary adjustments should be directionally consistent with forward-looking forecasts, supported by appropriate documentation, and subject to appropriate governance processes.'

With the outbreak of the COVID-19 crisis, institutions had to react under a quite pressured and short timeframe in order to respond quickly to the challenges imposed by an increased economic uncertainty environment. In many cases, institutions had to recur to the use of overlays to measure ECL where the approaches implemented were not adequately capturing this uncertainty in the economy. It is well known that, under certain circumstances, overlays are needed and should be kept as long as uncertainties remain. On a more permanent basis, reduced reliance on overlays is expected. The existence of permanent overlays needs to be very well understood and justified.

Given the significant impact that the use of overlays might have in the ECL measurement (and, as a consequence, directly in own funds) a good understanding of the multiplicity of the type of overlays implemented and the reasons behind the permanent nature of some of these overlays is seen as a key area for scrutiny from regulators and supervisors.

#### 3.3.1. General observations on the use of overlays

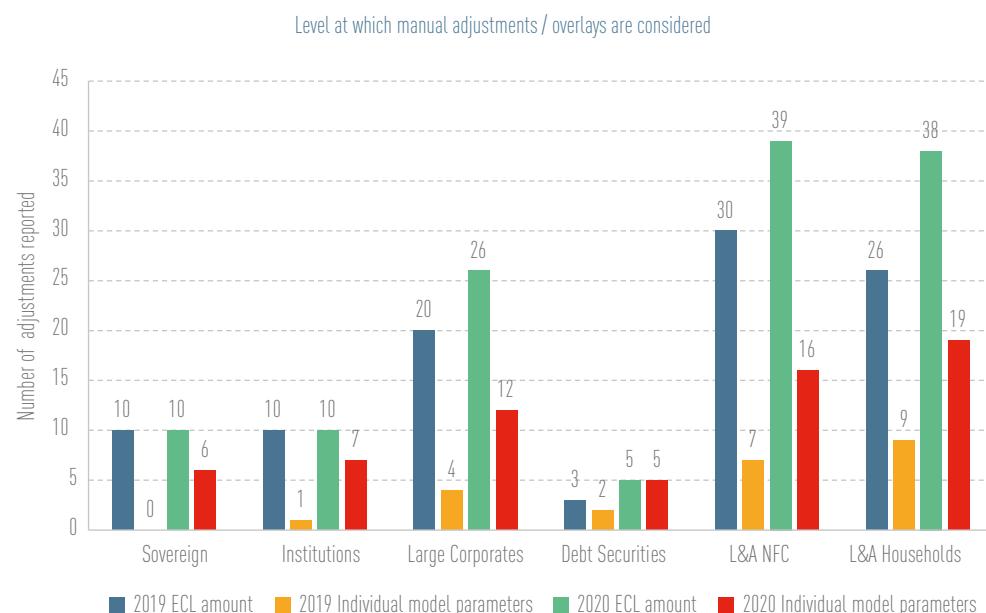
62. The COVID-19 pandemic resulted in extraordinary circumstances, which pushed models outside their ordinary working hypothesis. In light of this, some institutions introduced some post-model adjustments/overlays either at the level of the IFRS 9 risk parameter (e.g. PD, LGD and/or EAD) or directly at the ECL level. As showed in the next figure, the number of institutions/adjustments reported can vary significantly between portfolios. While for loans and advances

portfolios, this seems to be a widely implemented practice, the same is not valid for sovereign or institutions portfolios.

63. As regards the consideration of overlays when measuring ECL, while the use of permanent (sometimes complemented by temporary) overlays is rather limited and stayed mostly constant between 2019 and 2020, a significant increase solely in the use of temporary overlays took place for 2020. The portfolios on which the most institutions apply temporary overlays as of June 2020 are the large corporates (53% of institutions),

- the loans and advances non-financial corporates (68% of institutions) and for the loans and advances households (60% of institutions).
64. The overlays that were being considered by institutions as of December 2019 remained relatively constant between this date and June 2020. Those that were added on top during the first half of 2020 relate almost exclusively to the COVID-19 pandemic, which is not surprising. When analysing the percentage of overlays per portfolio under analysis that relate to the COVID-19 impact, it ranges from 64% to 37% which, on average, shows that around half of the overlays as of June 2020 relate to this crisis.
65. Manual adjustment/overlays are mostly applied at ECL level both in December 2019 and June 2020. However, in 2020, the number of adjustments at individual model parameter level are applied much more frequently when compared to December 2019. The increase in individual model parameter overlays is almost exclusively related to COVID-19 overlays. The overlays applied directly on the final ECL amount in June 2020 relate both to COVID-19 issues and non-COVID-19 issues. Some institutions have considered material overlays on certain portfolios, indicating that there are some deficiencies in the ECL measurement.

Figure 24: Level at which manual adjustments/overlays have been considered



### 3.3.2. Specific observations on the ECL overlays

66. The impact of the overlays or manual adjustments in the final ECL amount varies across institutions and per portfolio.

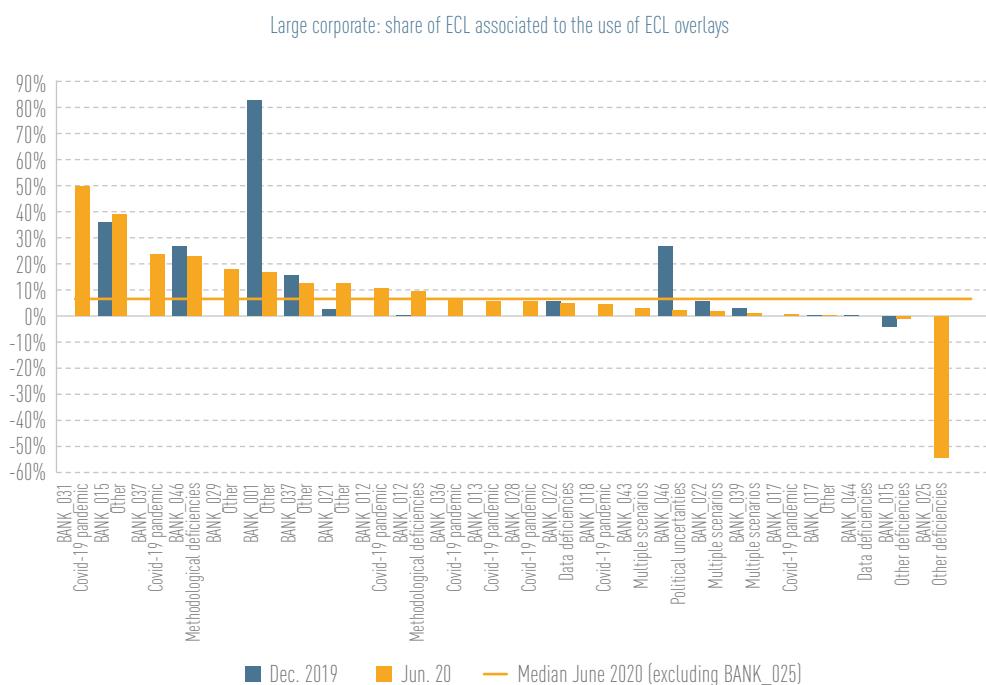
However, in some cases it can be quite significant. In the following paragraphs, additional information on the reasons behind the applied overlays and the observed impacts is provided.

Figure 25: Share of ECL associated with overlays by type of portfolio (December 2019 vs June 2020) [67]

Portfolio	Number of institutions	2019		2020		
		Average	Median	Number of institutions	Average	Median
Sovereign Sample	10	13.84%	0.45%	10	9.04%	1.78%
Institution Sample	10	6.18%	0.84%	10	9.73%	0.98%
Large Corporates	20	14.40%	0.23%	20	16.59%	6.61%
Debt Securities	3	10.45%	0.00%	3	5.67%	6.24%
L&A Non-financial corporations	30	6.95%	1.08%	30	11.20%	5.83%
L&A Households	25	6.21%	2.00%	25	9.66%	6.40%

[67] From a methodological point of view, whenever more than one layer of overlays applied at the ECL level [e.g. methodology deficiencies, Covid-19, inter alia] has been reported for any reference date, the sum of all layers was considered as a single observation for the purposes of computing the average and median amounts. In addition, when performing the calculations, the data provided by one bank in the sample has been excluded from the 'Large corporate' and 'Institutions' portfolio as it reported the exact same number in terms of (negative) contribution of ECL overlays for both (approximately 55%). Moreover, another bank was excluded from the 'Debt Securities' portfolio.

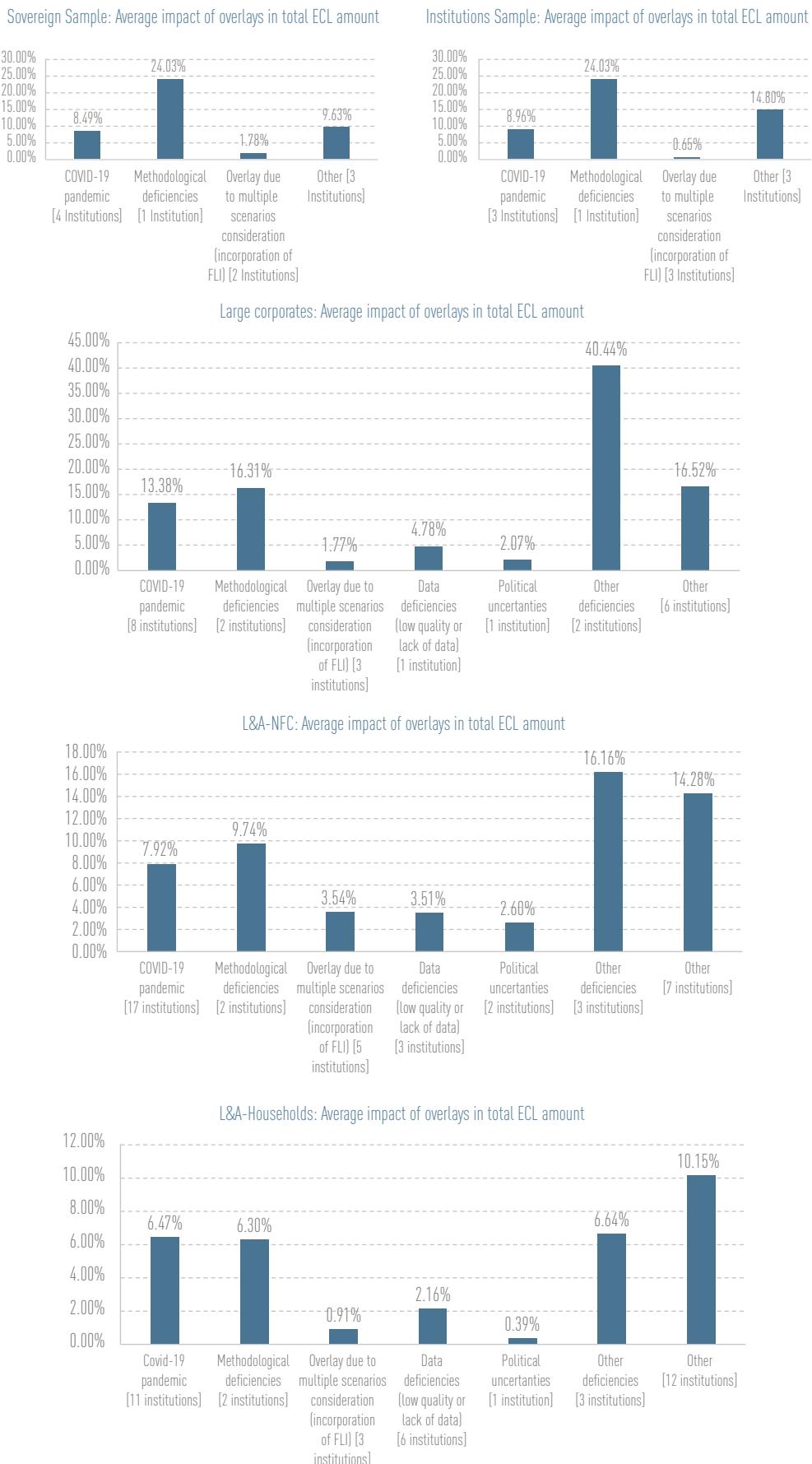
Figure 26: Large corporate: Share of ECL associated with ECL overlays (both COVID-19 and non-COVID-19 related) (December 2019 vs June 2020)



67. While the COVID-19 pandemic led to a wider use of overlays, there are other reported reasons to consider it when measuring ECL. As the previous Figure presents, overlays with material impact existed already in 2019. Understanding the model deficiencies and why the use of this practice continues to be verified over time is an aspect of utmost importance. Good governance measures around the application of overlays are

crucial. The next figures present in more detail, the overlays being considered at ECL level by institutions in the sample for each portfolio and, on average, the reported impact on the final ECL number as of June 2020. To note, these figures do not include information on overlays performed at the individual parameter level (it only reports overlays considered directly in the final ECL number).

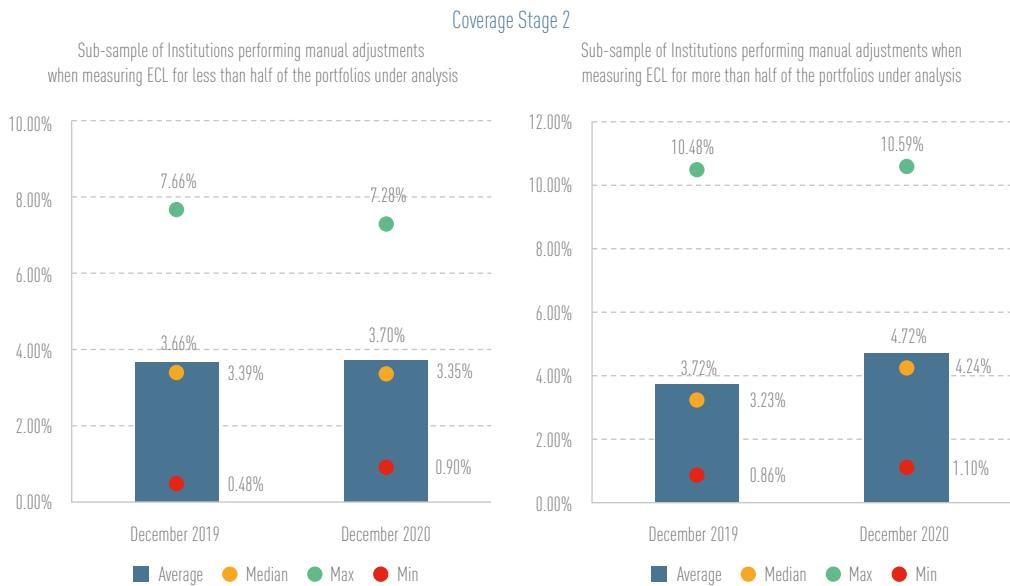
Figure 27: Impact of ECL overlays per portfolio and types of overlays



68. In order to better understand the impact that ECL overlays might have on different IFRS 9 key indicators, an analysis of the coverage ratios for Stage 2 considering

sub-samples of institutions was performed. Below, the results obtained, including the sample split, are presented.

Figure 28: Level of Stage 2 coverage ratios



69. As presented above, on average, the coverage levels are higher for institutions with more than half of portfolios affected by manual adjustments than for institutions applying adjustments for less than half of portfolios (as of June 2020). Interestingly, the sub-sample with manual adjustments performed for more than a half of portfolios reports a substantial increase in the coverage ratios when comparing the levels between December 2019 and December 2020. This evidence suggests that overlays may indeed play an important role especially under a scenario that could not be expected, that came very quickly, arose with a lot of uncertainty attached to it and under which material impacts in the financial statements of institutions can occur.
70. Going forward, it would be important to continue monitoring the use of overlays from institutions, in order to investigate whether and to what extent banks intend to adjust their ECL models in order to incorporate the effect of overlays or if some type of overlays will be kept in the future, despite their expected temporary nature. In this regard, it is worth pointing out that, as indicated in the EBA Guidelines on ECL, adjustments to allowances are expected to be used as an interim solution and should not be continuously used over the long term for a non-transitional risk

factor. Indeed, if the reason for the adjustment is not expected to be temporary, the institution's allowance methodology should be updated in order to incorporate the factor that is expected to have an ongoing impact on the measurement of ECL. Moreover, in order to avoid the creation of potential for bias, temporary adjustments should be directionally consistent with forward-looking forecasts, supported by appropriate documentation, and subject to appropriate governance processes [68].

### 3.3.3. Approach used to determine COVID-19 overlays

71. As regards the basis for the ECL overlays used as a response to COVID-19, 70% of the institutions reported that they do not rely on internal stress-testing analyses. Among the institutions which determine COVID-19 ECL overlays based on internal stress-test results, different practices seem to be in place, for example, considerations for sectorial stress testing; adjustment of single parameters based on the output of the stress-testing satellite models; adjustment of macroeconomic factors / risk parameters to consider COVID-19 shocks and impact of mitigating measures, and consideration for rating shifts.

[68] See paragraphs 54 to 56 of the EBA Guidelines on ECL.

Figure 29: ECL overlays used as a response to COVID-19 based on internal stress-testing analyses

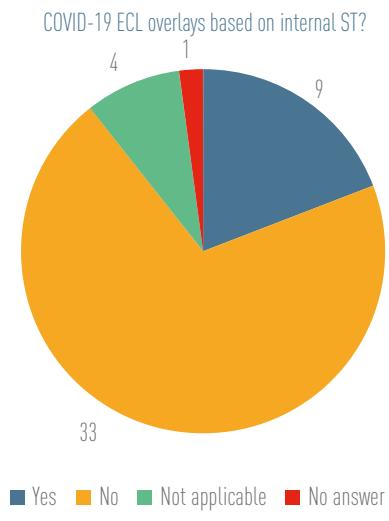
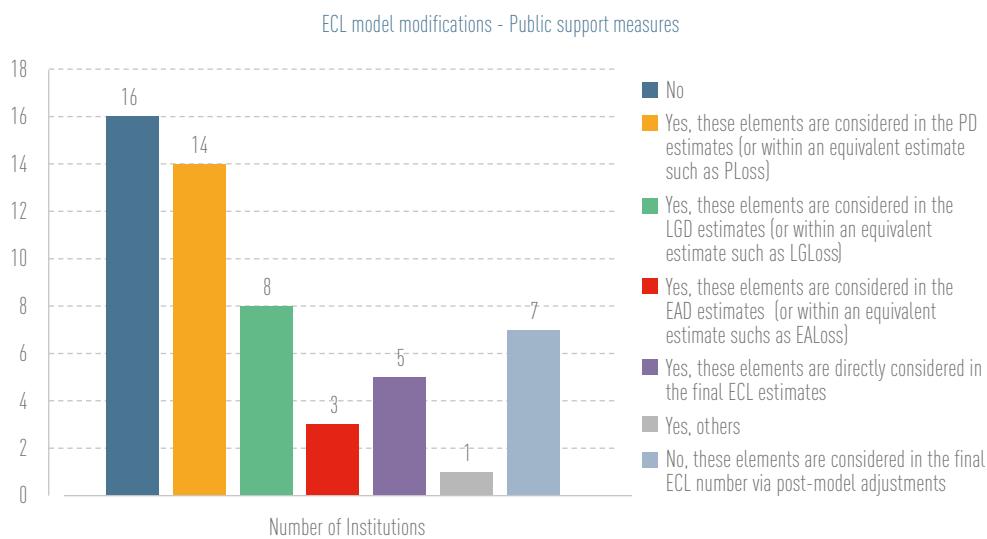


Figure 30: ECL model modifications to reflect public support measures



73. As regards the treatment of government guarantees issued in the context of COVID-19 on newly granted loans and on already existing instruments, different answers were also provided by the institutions in the sample, with the ma-

jority of institutions reporting the incorporation of the guarantees as part of the contractual terms, especially for newly granted loans following the outbreak of COVID-19:

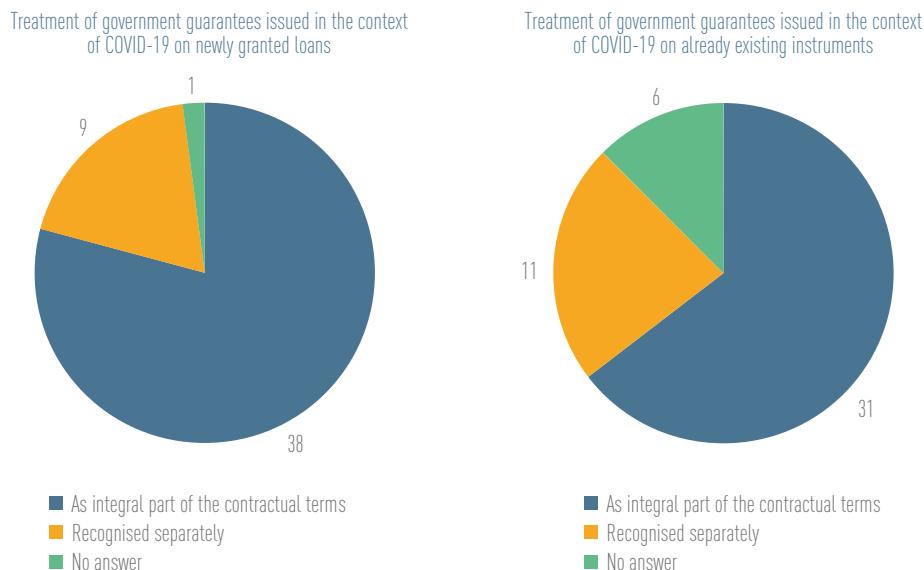
<sup>(69)</sup> In particular, according to IFS9 B5.5.17:  
‘The following non-exhaustive list of information may be relevant in assessing changes in credit risk:  
[...]’

<sup>(70)</sup> significant changes in the value of the collateral supporting the obligation or in the quality of third-party guarantees or credit enhancements, which are expected to reduce the borrower’s economic incentive to make scheduled contractual payments or to otherwise have an effect on the probability of a default occurring. [...]’

### 3.4. Other observations regarding ECL measurement in a COVID-19 scenario

72. According to the information collected, most often the effects of the public support measures are incorporated into the PD (30% of the institutions), LGD (17% of the institutions), via post-model adjustments in the final ECL (15% of the institutions) or is not captured via the ECL model (34% of the institutions). These results indicate that the effects are modelled in a very heterogeneous manner. However, in this context, it should be recalled that according to IFRS 9, collateral or a guarantee should only be taken into account under the SICR assessment if it impacts the borrower’s economic incentive to make scheduled contractual payments or have an effect on the probability of default occurring <sup>(69)</sup>.

Figure 31: Treatment of government guarantees



74. Due to the different nature of the COVID-19 crisis when compared to other crises observed in recent history (e.g. Global Financial Crisis), default and loss information observed during this recent pandemic is expected to be different as well. The vast majority of the institutions have not (yet) reflected this recent default and loss information in their current historical data-

bases and ECL model. Still, a minority of institutions already incorporated the information into their current database and ECL model without any further adjustments to the data. With respect to the future incorporation, the majority of institutions (70%) intend to include COVID-19 data in their database and ECL model, whereas 30% have not yet addressed this issue internally.

#### MORE INFO



### WHAT ARE THE MAIN MODELLING STEPS IN IRB ESTIMATES AND HOW COVID-19 DATA WILL BE INTEGRATED INTO THE IRB IN THE FUTURE?

The representativeness of the data underlying the estimation is requested for different modelling steps:

- in the risk differentiation, the data used to build statistical models or other mechanical methods for the purpose of assigning obligors or exposures to rating grades or pools (Article 174 of the CRR, Articles 39 in the RTS on assessment methodology [70] and in paragraphs 20 to 27 in the Guidelines on PD and LGD estimation [71]);

- in the risk quantification, the CRR requires institutions using the internal ratings-based approach to estimate PDs by obligor grade from long-run averages of one-year default rates (Article 180) and use LGD estimates that are appropriate for an economic downturn if those are more conservative than the long-run average (Article 181), if they have received the authorisation to use own estimates. These requirements are further clarified in Articles 45 and 46 in the RTS on assessment methodology and paragraphs 28 to 34 and 83 in the GL on PD and LGD estimation.

The COVID-19 pandemic and in particular the measures implemented by member

[70] Final Draft RTS on Assessment Methodology for IRB.pdf (europa.eu).

[71] Guidelines on PD and LGD estimation (EBA-GL-2017-16).pdf (europa.eu).

states and by the EU to counter the health and the related economic crisis impact the IRB-relevant data via two channels:

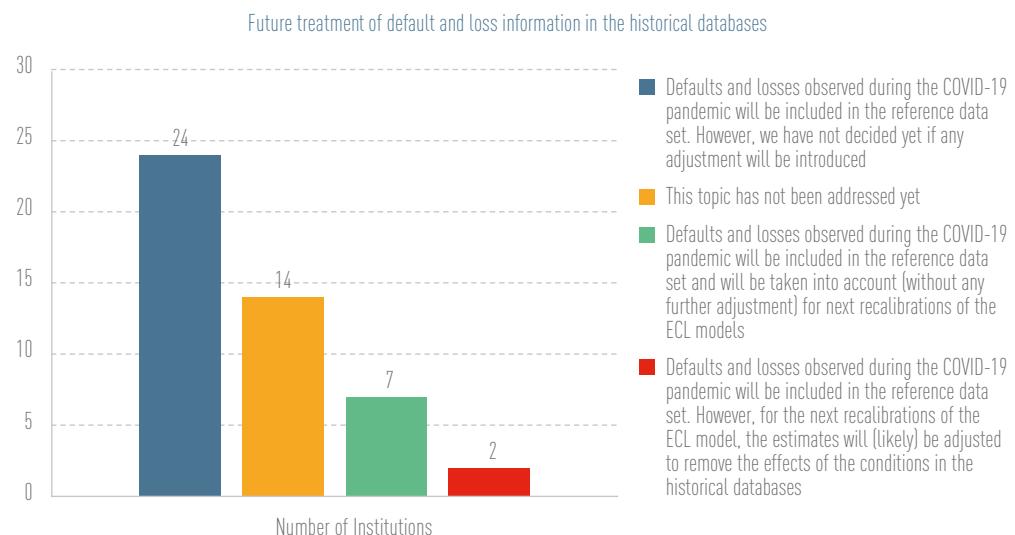
- Directly via moratoria and public guarantee schemes (PGS) and other regulations that lead to changes in the institutions policies (e.g. lending standards) and in the contracts with the obligors.
- Indirectly via other COVID-19 support measures that impacted among others the obligor's financials or behaviour.

Ensuring that the underlying model and data is representative, is part of the normal monitoring of IRB models and not unique to the COVID-19 pandemic. This is only natural, since IRB models are relying on long-run averages and on the underlying assumption that past performance

is reflective of potential future risks. Consequently, it is clear that all data should be used, but at the same time also be ensuring that the data is representative. In case of lack of representativeness, this is normally dealt with by applying a margin of conservatism to the estimates.

In this context, the EBA believes that a principle-based approach should be followed, leveraging on previous regulatory products already published (RTS on assessment methodology and Guidelines on PD and LGD estimation). It may therefore be necessary to assess how the COVID-19 impact shall be dealt with in several dimensions e.g. changed scope of model input values, increased or decreased observed default rates to be included in the long-run averages (or not) and downturn estimates.

Figure 32: Future treatment of default and loss information in the historical databases



75. That said, it is likely that the public support and moratoria measures introduced across EU countries reduced the level of defaults that would otherwise be observed in the current economic conditions. Therefore, it cannot be excluded that the increase in the default rates that might be observed when the government support measures will be lifted could negatively affect institutions' provision levels.
76. Approximately 40% of the institutions have indicated that financial covenants have been suspended due to the COVID-19 pandemic. Those suspensions were almost always granted on a case-by-case

basis, often explicitly differentiating between those firms that were already unviable before the pandemic and those expected to only temporarily experience financial difficulties. Largely, it is reported that around 5 to 10 percent of exposures with suspended financial covenants would have breached them. Where banks also use covenant breaches as a (sole) trigger for Stage 2 or Stage 3 transfers, the impact of such suspensions can be material in terms of the exposure amount to be transferred, but seems negligible in terms of the potential impact on ECL (please see Table 3).

Table 3: Impacts from financial covenants suspension

Portfolio	Number of Institutions reporting impact	H1 2020 (simple average)			
		% of exposures breaching suspended covenants	% of exposures that would have been transferred to Stage 2 if covenant not suspended	% of exposures that would have been transferred to Stage 3 if covenant not suspended	Effect of the suspension on ECL
LDP: Sovereign sample	3	10%	0%	0%	0%
LDP: Institutions sample	2	6%	42%	0%	0%
LDP: Large corporate sample	6	3%	14%	25%	3%
HDP: Debt securities - Non-financial corporations (other than large corporates)	1	10%	0%	0%	0%
HDP: Loans and advances - Non-financial corporations (other than large corporates)	6	5%	28%	20%	0%
HDP: Loans and advances - Households	3	0%	33%	0%	1%

### 3.5. Differences between Accounting and Prudential concepts (ECL vs EL)

MORE INFO



#### WHAT IS THE REGULATORY TREATMENT OF ACCOUNTING PROVISIONS WHEN THE IRB APPROACH IS USED?

The regulatory treatment of accounting provisions differs between banks using the standardised approach and institutions that apply IRB models. In particular, IRB institutions are required to compare accounting provisions with regulatory expected credit losses. Any shortfall shall be deducted from Common Equity Tier 1 capital, while any excess of accounting provisions can be included in Tier 2 up to a limit of 0.6% of credit risk-weighted assets (RWA) calculated under the IRB approach.

Therefore, under the IRB framework, the variability in the accounting is partially counterbalanced by the mechanism of shortfall and excess. Indeed:

- If the expected credit losses under IFRS 9 are lower than the expected losses (EL) under IRB (i.e. shortfall of provisions), the difference between the expected loss under IRB and the expected credit losses under IFRS 9 is deducted from the CET1 capital. Therefore, the solvency ratios as well as the leverage ratio, are not impacted by the IFRS 9 provisions, but solely by the IRB parameters.
- If the expected credit losses under IFRS 9 are higher than the expected

losses under IRB (i.e. excess of provisions) the difference between the expected loss under IRB and the expected credit losses under IFRS 9 is added to Tier 2 capital up to the limit mentioned previously. Therefore, the solvency ratios based on Common Equity Tier 1 and Tier 1 capital as well as the leverage ratio are solely impacted by the amount of IFRS 9 provisions, given that this excess of provisioning is not added back to the institution's Common Equity Tier 1 or Additional Tier 1 capital.

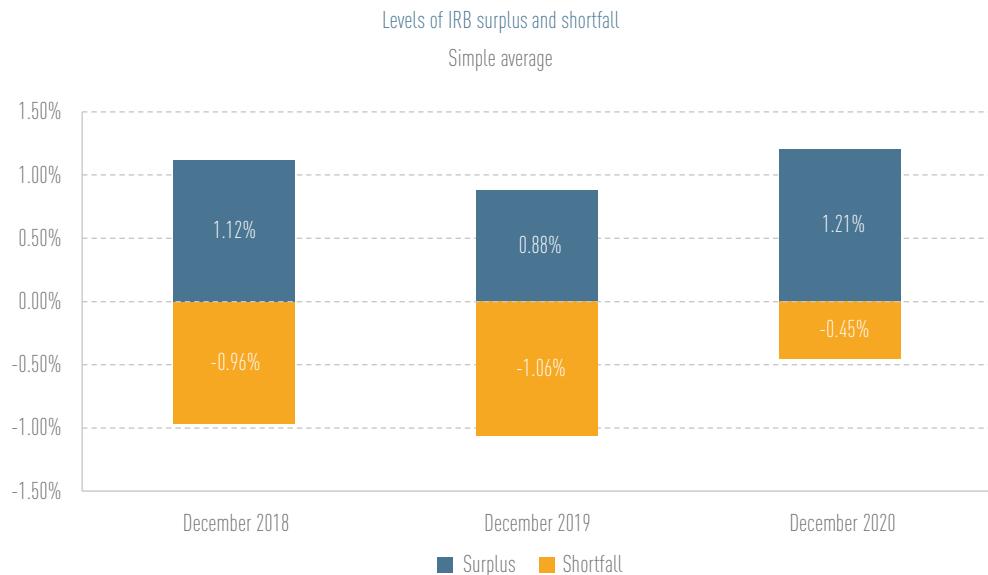
As per the relevant EBA Guidelines [72], where the calculation for the overall non-defaulted portfolio referred to in Article 159 of Regulation (EU) No 575/2013 results in an IRB excess, institutions may use this IRB excess to cover any IRB shortfall from the calculation carried out in accordance with that article for the overall defaulted portfolio. The contrary would not be allowed, i.e., compensating an IRB shortfall for the overall non-defaulted portfolio with an IRB excess for the overall defaulted portfolio (since specific credit-risk adjustments on exposures in default shall not be used to cover expected loss amounts on other exposures).

[72] Please see paragraph 212 of EBA/GL/2017/16, Guidelines on PD estimation, LGD estimation and the treatment of defaulted exposures.

77. As regards the IRB excess/shortfall effectively reported by institutions for supervisory purposes (COREP), the next Figure

summarises how much this difference represents in terms of CET1 as of December 2018, 2019 and 2020.

Figure 33: Levels of IRB surplus and shortfall as of December 2019 and 2020 [simple average]

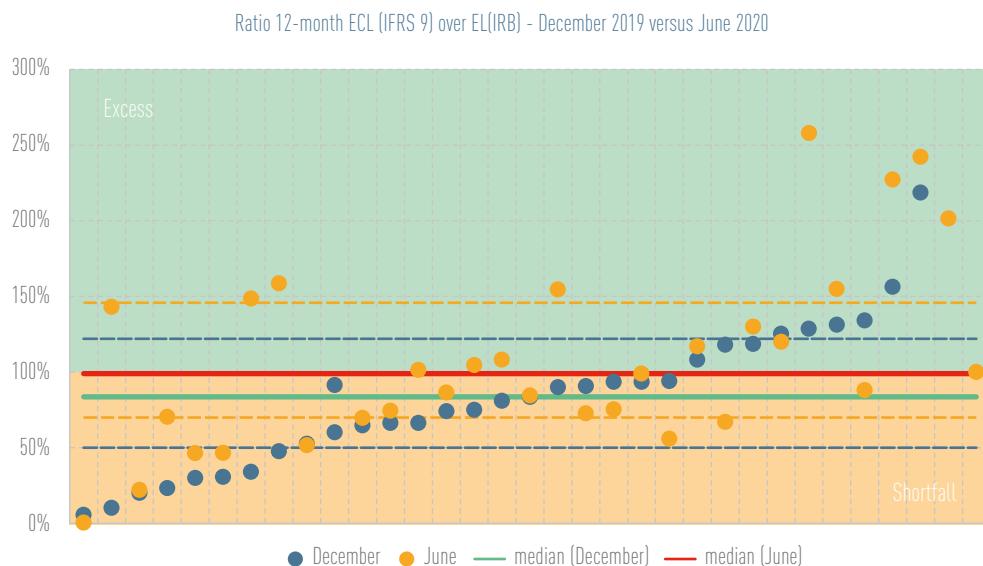


78. An increase in the reported IRB surplus and a decrease in the reported IRB shortfall were observed when comparing December 2020 with previous reference dates, which is consistent with the observations presented in this report as regards the general increase of the average coverage ratios. The direction of the evolution observed, not surprisingly, is also consistent with the first EBA observations on the impact of the IFRS 9 first application as presented in the EBA report published in December 2018.
79. As regards the number of institutions reporting a shortfall or an excess, it should be recalled that, in practice, institutions may simultaneously report a shortfall and an excess for the same reference date. As previously explained, this calculation is performed separately for defaulted and non-defaulted exposures and compensation is not always allowed. To provide an overview of what the figure previously presented means in terms of number of institutions reporting a complete set of data as of December 2019 and December 2020, please note that:
- a. Shortfall: 73% of the institutions reporting a decrease in the IRB shortfall; 12% reporting an increase in the IRB shortfall and 15% reporting no shortfall for both reference dates;
- b. Excess/surplus: 62% of the institutions reporting an increase in the IRB excess/surplus; 22% of the institutions reporting a decrease in the IRB excess/surplus and 16% reporting no excess/surplus for both reference dates.
80. The reasons behind a shortfall or surplus of accounting ECL vis-à-vis prudential expected losses for non-defaulted exposures remained stable when comparing December 2019 with December 2018. The main reasons behind a shortfall pointed out by the institutions in the sample relate to higher prudential PDs and LGDs when compared to the accounting parameters. As regards the surplus, the main reason mentioned by institutions relate to a prudential PD through-the-cycle (TTC) 12 months being lower than the accounting PD lifetime.
81. In the case of defaulted exposures, there is more heterogeneity in the causes of such deviations and as such it is not possible to identify the most frequent cause for a difference between the accounting ECL and the expected losses calculated under the regulatory framework. The inclusion of different recovery scenarios for accounting purposes seems to be, for a few institutions, the main reason for reporting a surplus of expected losses.

82. The next Figure focuses on the Large corporate exposure class. It shows a proxy for the magnitude of the adjustment in relative terms as of December 2019 and June 2020. As expected, due to the increase in IFRS 9 12-month PD observed

in June 2020 (see Sub-section 4.1), the ratio between the IFRS 9 12-month ECL and the regulatory expected loss increased between December 2019 and June 2020 (i.e. decrease in shortfall or increase in Excess).

Figure 34: Ratio 12M ECL (IFRS 9) over EL (IRB) [73]



[73] This ratio is illustrating the difference between the ECL (IFRS 9) and the EL (IRB). It is however not directly leading to a shortfall or an excess, as these amounts are calculated at the total portfolio level, while the figure is solely based on the Large corporate counterparties. In addition, the ECL (IFRS 9) is based on a lifetime estimate for exposures in Stage 2 (and Stage 3), while the ECL (IFRS 9) used for this graph is based on the 12-month ECL.

## 4. IFRS 9 PD variability and robustness

### KEY TAKEAWAYS



### KEY TAKEAWAYS OF THIS SECTION

*To note, the information included in this section of the IFRS 9 monitoring report is based on the data collected via the IFRS 9 benchmarking exercises for a sample of common counterparties of low-default portfolios. However, considering that the majority of the counterparties observed were on the Large corporate exposure class, the analysis conducted for the purpose of this section and the related findings were based exclusively on Large corporates, unless where reported otherwise.*

The variability in the IFRS 9 12-month PD significantly increased in the context of the COVID-19 pandemic, while the IRB estimates remained substantially stable. This pattern can be explained by the more point-in-time nature of the IFRS 9 estimates and the incorporation of forward-looking information (FLI).

When assessing the practices adopted by institutions presenting a lower increase in the IFRS 9 12-month PD, it was observed that some of them introduced in the first half of 2020 certain adjustments (e.g. 'smoothing factors') to the macroeconomic variables underlying the IFRS 9 scenarios. Other areas of scrutiny relate to cases of institutions explicitly mentioning not having revised the IFRS 9 scenarios or showing a relative increase in the IFRS 9 PD similar to the one observed on the regulatory PD, raising concerns on the limited impact of forward-looking information on the IFRS 9 estimates.

Moreover, those institutions for which a lower increase in the IFRS 9 12-month PD was observed generally introduced COVID-19 overlays at the ECL level. Nevertheless, in many cases, the impact of these overlays on the amount of ECL recognised in the first half of 2020 was below or around 10%, raising some interrogations on whether such overlays could effectively compensate for

the lack of reactivity observed in the IFRS 9 12-month PD<sup>[74]</sup>. Cases where the low increase in the PD has not been compensated for by the use of overlays represent an area of further scrutiny for supervisors.

The higher increase in the IFRS 9 12-month PD observed in 2020 also affected the interplay between the IFRS 9 and IRB PD. Indeed, in June 2020, more than half of the institutions reported an average IFRS 9 12-month PD higher than the IRB PD. However, the data collected as of December 2020 seem to indicate that the interplay between the IFRS 9 12-month PD and the IRB PD is going to come back to a situation pre-COVID-19.

Despite the similarities between the IFRS 9 and the IRB models, one third of the institutions in the sample reported not using IRB models at all for determining the IFRS 9 PD or to make only limited use of them. Moreover, significant differences have been observed, even across those institutions leveraging on IRB models to a greater extent<sup>[75]</sup>, in the nature of adjustments applied to the IRB estimates, reflecting the adoption of different practices for estimating the IFRS 9 PD when departing from the PD used for regulatory purposes. In addition, differences have also been observed in the concept used for modelling the IFRS 9 PD. Indeed, even though in the majority of cases, the IFRS 9 PD is modelled in order to reflect the probability of occurrence of the event of default as defined in line with the EBA GL 2016/17<sup>[76]</sup>, some institutions reported modelling other events, such as for example an IFRS 9 PL (probability of loss) instead of a PD (probability of default). In this case, it is

<sup>[74]</sup> See also Sub-section 3.3.

<sup>[75]</sup> I.e. using IRB models for determining the IFRS 9 PD also from a risk quantification perspective.

<sup>[76]</sup> EBA Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013.

clear that some variability will be observed, given that all the defaults that did not lead to a loss are excluded from the modelling.

The high degree of judgement involved in the estimate of the IFRS 9 risk parameters and the absence of supervisory validation for the IFRS 9 ECL models increase the im-

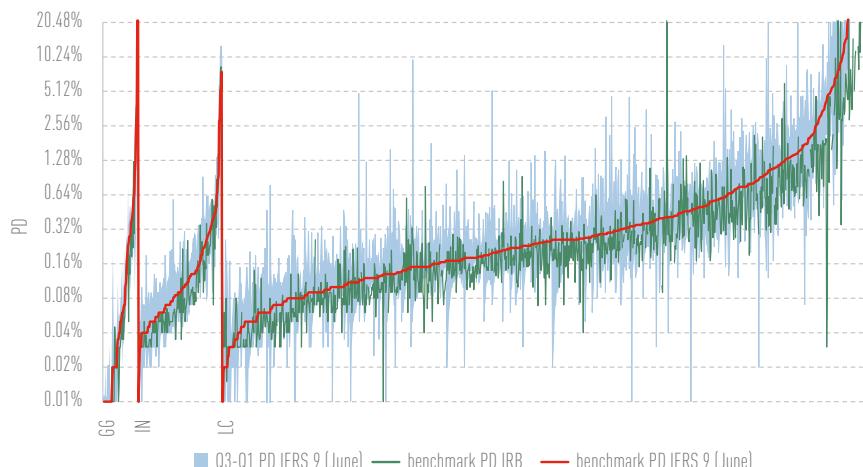
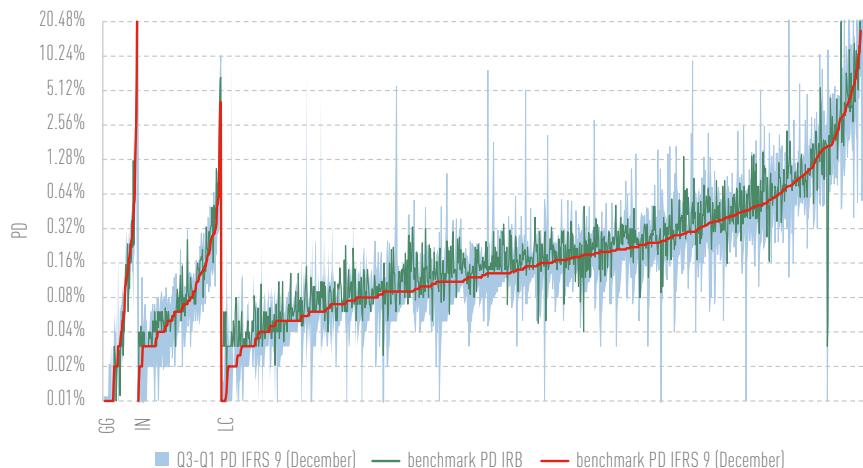
portance for competent authorities to gather a thorough understanding of the IFRS 9 modelling practices, including the degree of leverage on the data and information used for regulatory purposes and an understanding of the factors that affect the variability in the IFRS 9 estimates in comparison to those used for regulatory purposes.

#### 4.1. Variability in the IFRS 9 PD and interplay with IRB estimates

83. The most challenging part in comparative risk studies is to distinguish the influence of risk-based and practice-based drivers. LDP portfolios generally show so few data, and in particular defaults, that historical data may not provide statistically significant differentiation between

different credit risk portfolios. However, for these portfolios, risk parameters can be compared for identical obligors to which the institutions have real exposures, thus neutralising the risk-based driver. The key limitation of this approach is the representativeness of the common sample compared with the whole portfolio of each institution. Therefore, it is interesting as a first step to visualise this variability at counterparty level:

Figure 35: Variability in IFRS 9 12-month PD compared to the benchmark PD (December 2019 and June 2020)



The x axis contains all the counterparties with a PD benchmark, the y axis is a logarithmic scale. GG, IN and LC stand for counterparties falling under the sovereign, institution and [large] corporates exposure class respectively. The graph is based solely on cases where an IRB estimate is provided [i.e. the counterparty is not under a permanent partial use or roll out portfolio], and the benchmarks are calculated if an estimate has been provided by at least three institutions.

84. In this regard, Figure 35 already provides some observations:

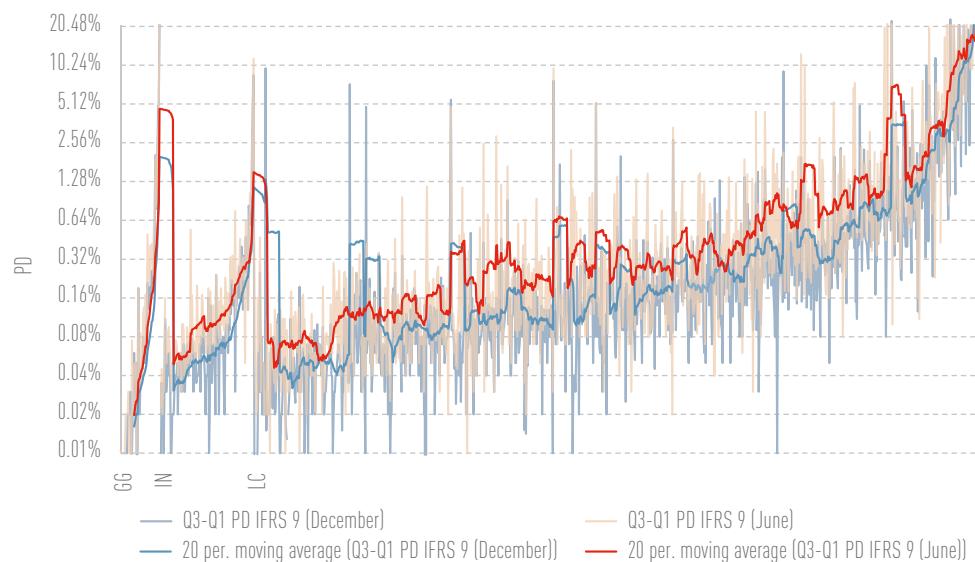
- 1) As expected, most of the counterparties observed are on the Large corporate exposure class, and as a result the variability observed at institution level includes more robust estimates of the variability on the whole portfolio for this exposure class. Therefore, any statistic aggregating the data at institution level included in this section will be based exclusively on the Large corporate exposure class, unless where specified otherwise;
- 2) Overall, as of December 2019, the benchmark PDs IFRS 9 were generally below the benchmark PDs IRB where-

as the trend is the reverse in June 2020, with the benchmark PDs IFRS 9 generally above the benchmark PDs IRB;

- 3) The variability in absolute terms, measured as the difference between the first and third quartile of the observation on the IFRS 9 12-month PD, is increasing with the PD value. Consequently, the variability observed at institution level is expressed in relative terms, compared to the benchmark PDs.

85. A focus on the variability is also helpful to visualise its evolution between December 2019 and June 2020, and the difference between the IRB and the IFRS 9 estimates.

Figure 36: Evolution of the variability of PD IFRS 9 between December 2019 and June 2020

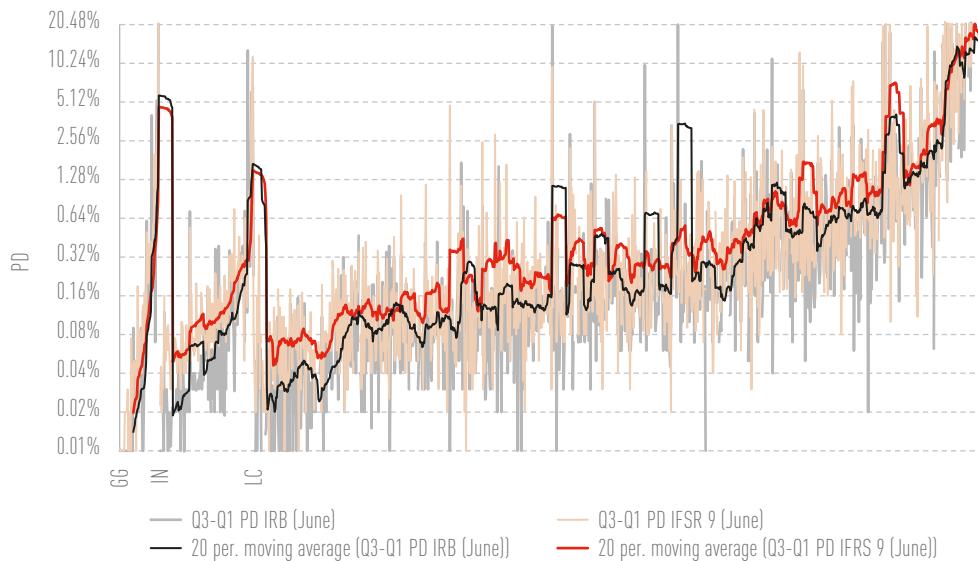


*GG, IN For visualisation purposes, a trend is calculated as the moving averages, using 20 estimates.*

86. As shown in Figure 36, the variability of the IFRS 9 12-month PD for LDP portfolios generally increased between December 2019 and June 2020. Following this

increase in the variability, in June 2020 the IFRS 9 variability for LDP portfolios is higher than IRB variability, as can be inferred from Figure 37.

Figure 37: Comparison of the variability of PD IFRS 9 and IRB PD in June 2020

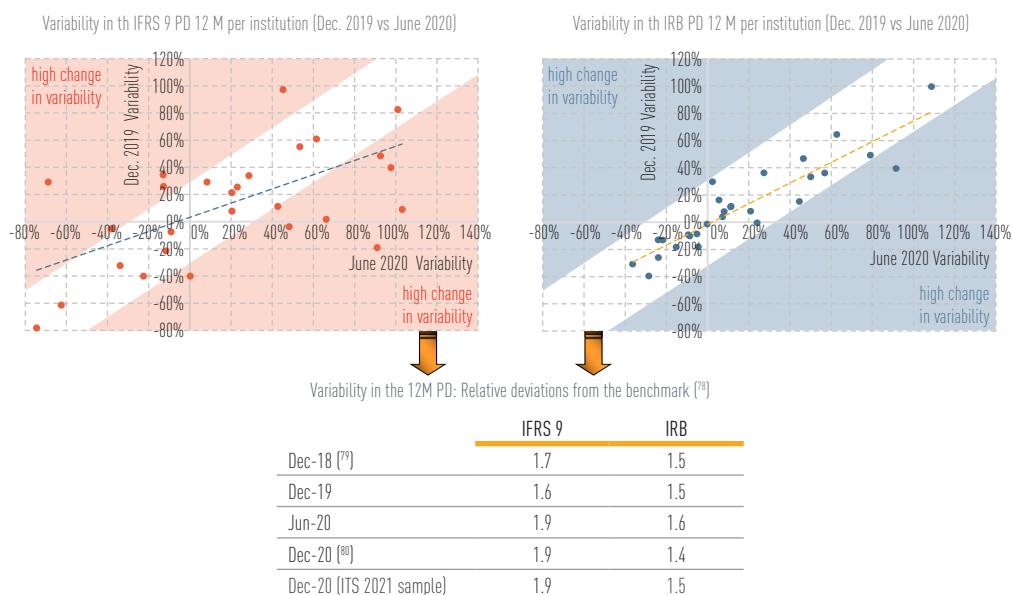


87. With specific reference to the Large corporate exposure class<sup>(77)</sup>, the variability in the IFRS 9 12-month PD significantly increased in the context of the COVID-19 pandemic. In particular, as of June 2020, the estimates of the IFRS 9 12-month PD for the same counterparties varied

among the institutions in the sample by approximately a factor 2 (1.6 in December 2019), while the IRB estimates remained substantially stable. The higher variability in the IFRS 9 estimates can be observed from the charts presented in Figure 38. Indeed, a lot of institutions presented significant changes in the IFRS 9 PD during the pandemic, despite the substantial stability in the IRB estimates.

<sup>(77)</sup> Where the number of counterparties is the highest.

Figure 38: Large corporate: Variability in IFRS 9 and IRB 12-month PD [December 2019 vs June 2020]



<sup>(78)</sup> Relative interquartile range of the 'weighted average relative deviations PD 12 M IFRS 9' (see Annex 3: Methodology to measure PD variability).

<sup>(79)</sup> Evidence based on the data collected via the first ad-hoc exercise for the sample of institutions included in the quantitative analyses of the second ad hoc exercise and which submitted the IFRS 9 templates of the ITS on 2021 supervisory benchmarking.

<sup>(80)</sup> Evidence based on the data collected via the IFRS 9 templates of the ITS on 2021 supervisory benchmarking for the sample of institutions included in the quantitative analyses of the first and second ad hoc exercise.

## METHODOLOGY



## METHODOLOGICAL APPROACH – MONITORING THE VARIABILITY AT INSTITUTION LEVEL

In order to monitor in a quantitative manner the variability in the PD estimates, it is necessary to aggregate all the variability observed for each counterparty into a single number. While various methodologies are possible, the current report is based on a two-step process:

- i. First, for each bank in the sample, a bank specific variability metric is calculated. To this end, the metric aggregates the distance between the bank estimates and the benchmark estimates (calculated as the median of the estimates of its peers), taking into consideration the materiality of the exposures <sup>[81]</sup>. In particular, each single counterparty deviation from the benchmark is weighted by the exposure value and the LGD applied by the institution to the counterparty at stake. Therefore, the bank's specific variability reflects the impact on 12-month ECL variability. For instance, a bank specific variability at

<sup>[81]</sup> Further details on the methodological approach applied are provided in Annex 3: Methodology to measure PD variability.

20% means that, ceteris paribus, the bank has a total 12-month ECL on the common counterparties sample that is 20% below the benchmark.

- ii. Second, a single metric summarises the deviations of all the institutions in order to represent the overall dispersion of the estimates. This metric is calculated as the ratio of the deviations from the conservative institutions (defined as the third quartile of the deviation – Q3) over the deviation of less conservative institutions (defined as the first quartile of the deviation – Q1).

Moreover, in order to ensure comparability between IFRS 9 and IRB estimates, the observations are based only on those counterparties reported under the Large corporate exposure class that are treated for regulatory purposes under the IRB approach (i.e. counterparties under the standardised approach have been filtered out).

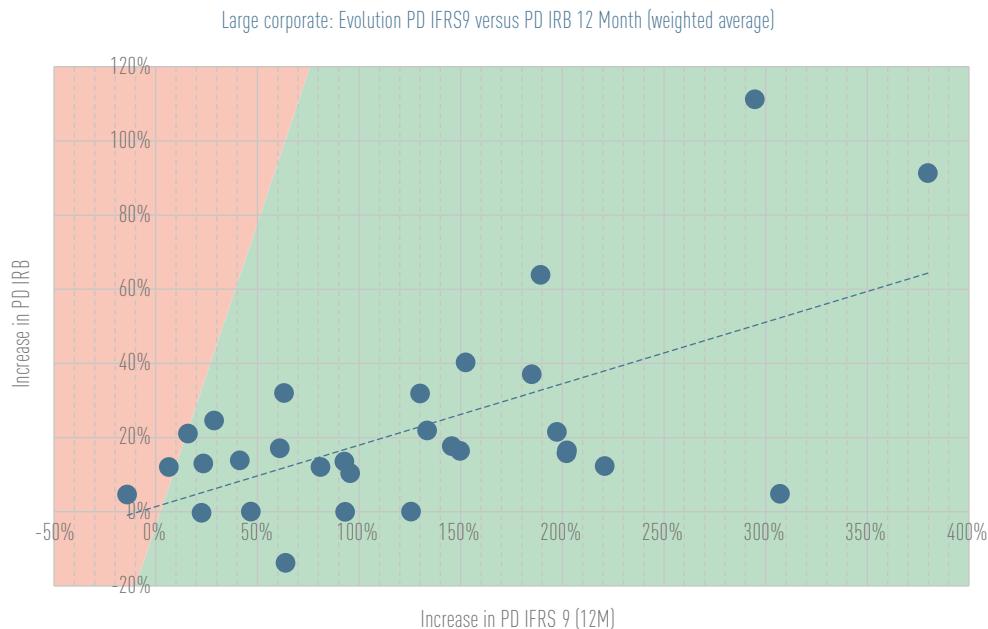
Further information on the methodological approach adopted is included in Annex 3: Methodology to measure PD variability.

## 4.2. Evolution of IFRS 9 PD with COVID-19

88. The different variability between the IFRS 9 and the IRB estimates can be explained by the higher increase in the IFRS 9 12-month PD recognised in the first half of 2020. Indeed, for almost all

the institutions in the sample, the increase in the IFRS 9 PD was larger than the IRB PD, reflecting the more point-in-time (PiT) nature of the former and the effects stemming from the incorporation of forward-looking information as well as the different impact arising from the public support measures introduced across EU countries.

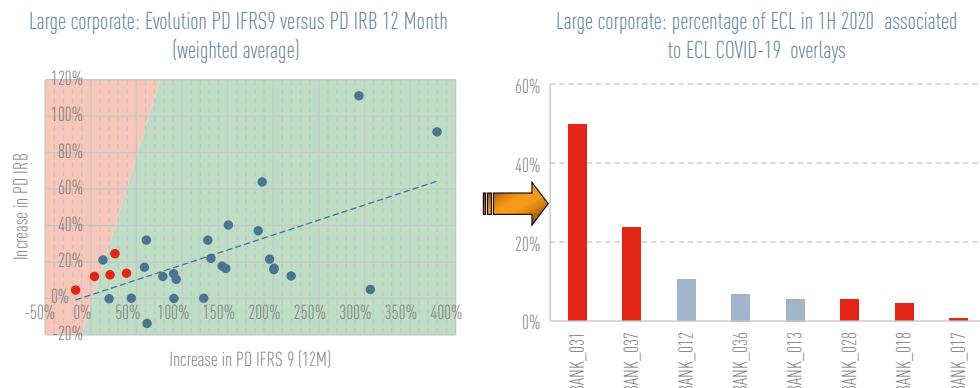
Figure 39: Large corporate: Evolution in the IFRS 9 and IRB PD 12 months in the 1H 2020



89. However, significant differences have been observed in the evolution of the IFRS 9 12-month PD even across institutions located in the same country. Moreover, as shown in the next Figure,

generally those institutions for which a lower increase in the IFRS 9 12-month PD estimates was observed, introduced in the first half of 2020 COVID-19 overlays at the ECL level.

Figure 40: Large corporate: Evolution in the IFRS 9 and adoption of ECL COVID-19 overlays



90. Nevertheless, in many cases, the impact of these COVID-19 overlays contributed to the amount of ECL recognised in the first half of 2020 was below or around 10%, raising some questions on whether such overlays could effectively compensate for the lack of reactivity observed in the IFRS 9 12-month PD. In addition, cases where the low increase in the PD has not been compensated for by the use of overlays represent an area of further scrutiny for supervisors.
91. When assessing the practices adopted by institutions presenting a lower increase

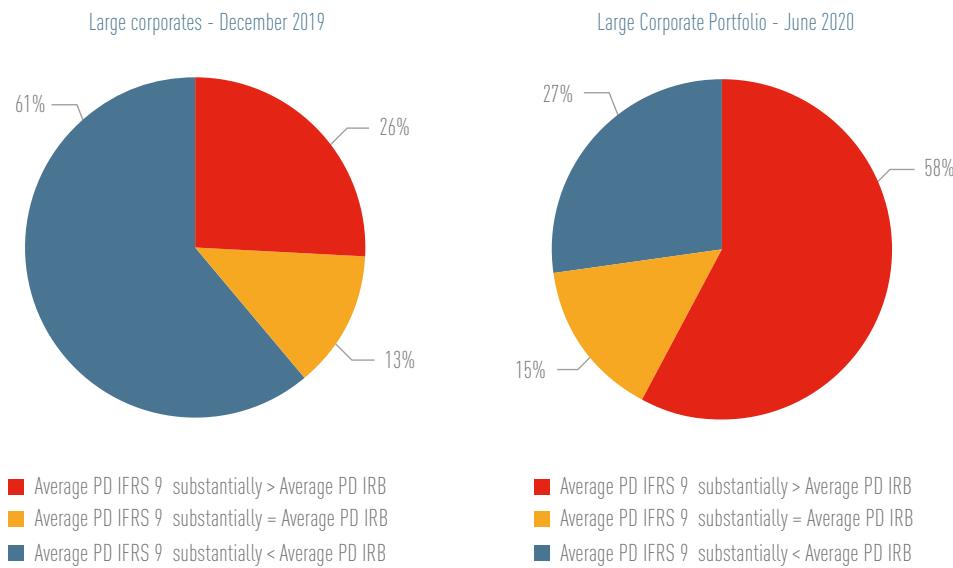
in the IFRS 9 12-month PD estimates, it was observed that some of them introduced in the first half of 2020 certain adjustments (e.g. 'smoothing factors') to the macroeconomic variables underlying the IFRS 9 scenarios, in order to reflect their average forecast (see Sub-section 5.1.3). Other areas of scrutiny relate to cases of institutions explicitly mentioning not having revised the IFRS 9 scenarios, given the uncertainty of the macroeconomic context, or showing a relative increase in the IFRS 9 PD substantially aligned to that observed in the regulatory

- PD, despite the application of COVID-19 overlays at the PD level, raising concerns about the limited impact of forward-looking information on the IFRS 9 estimates.
92. The larger increase in the IFRS 9 12-month PD estimates observed during the COVID-19 pandemic also affected the interplay with the IRB 12-month PD. Indeed, while in December 2019, the majority of the institutions in the sample presented an average IFRS 9 12-month PD substantially lower than the regulatory PD, in June 2020, as a consequence of the evolution in the IFRS 9 estimates, more than half of the institutions report-

ed an average IFRS 9 12-month PD higher than the IRB PD.

93. However, approximately one third of the sample continued to present a lower average IFRS 9 PD. In most of the cases, this pattern is associated with institutions that do not leverage IRB models for determining the IFRS 9 PD or for which a small increase in the IFRS 9 PD has been observed in the first half of 2020. This should be further scrutinised, as it would raise concerns about the practices used for the integration of forward-looking information and in particular on the degree to which this information affects the IFRS 9 estimates.

**Figure 41: Large corporate: Comparison between the average IFRS 9 and IRB 12-month PD (December 2019 vs June 2020)**

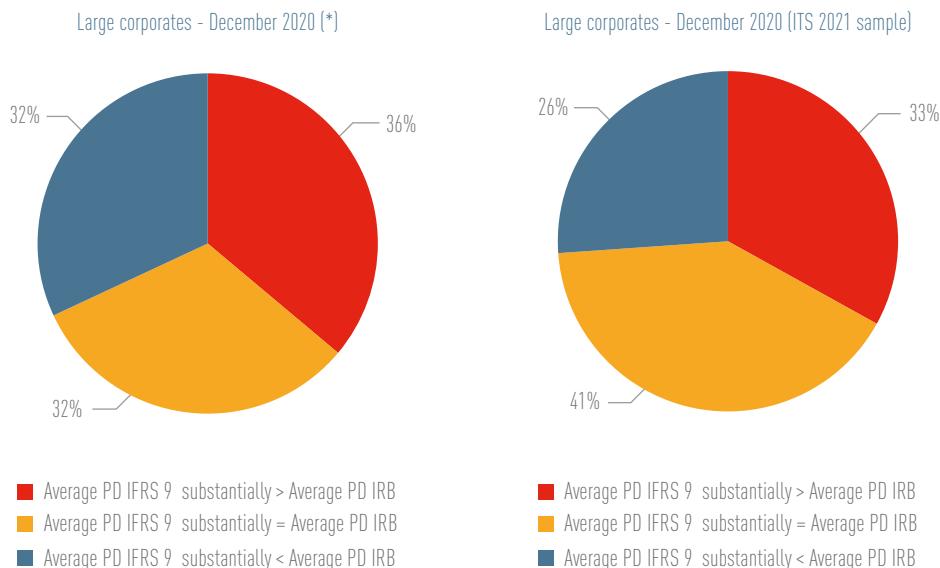


To note, for the purpose of this comparison, the average IFRS 9 12-month PD has been considered substantially higher ('substantially >') than the IRB PD when the relative difference with the latter was above 10%. Similarly, the average IFRS 9 12-month PD has been considered substantially lower ('substantially <') than the IRB PD when the relative difference with the latter was below 10%.

94. However, the evidence collected through the ITS on 2021 supervisory benchmarking with reference to the date December 2020, seems to indicate that the interplay between the IFRS 9 12-month PD and the IRB PD is going to come back to a situation

pre-COVID-19. Indeed, some of the institutions for which in June 2020 an IFRS 9 12-month PD higher than the IRB PD was observed, have reported as of December 2020 IFRS 9 PD estimates substantially aligned to the regulatory ones.

Figure 42: Large corporate: Comparison between the average IFRS 9 and IRB 12-month PD (December 2020)



(\*) based on the ITS 2021 data for the institutions considered in the sample for the 2nd ad hoc exercise quantitative analyses.

### 4.3. Differences in the use of existing IRB models for IFRS 9 estimates

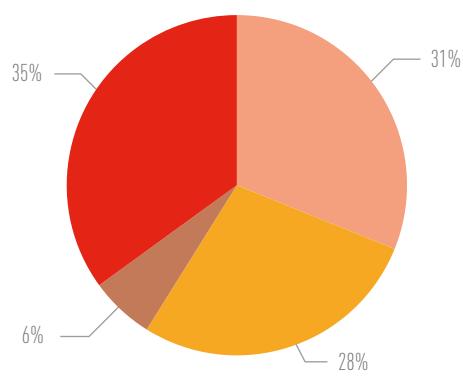
95. IFRS 9 does not prescribe the use of a specific approach for determining the expected credit losses. However, as already mentioned in the previous section<sup>[82]</sup>, almost all the IRB institutions in the sample apply an EAD\*PD\*LGD approach. Notwithstanding that, approximately one third of them reported not using IRB models at all for determining the IFRS 9 PD or using them only to a limited extent. That said, the 'use of IRB models' covers a wide range of heterogeneous practices, from a simple use of the database and IT infrastructure, to the use of the regulatory estimates which are then adjusted to comply with IFRS 9 requirements. Figure 43 provides an overview of

these different practices, broken down by degree of use of IRB models. The figure follows the usual three phases of the credit-risk modelling:

- Phase 0 – observation: the institutions collect data on the occurrence of an event (e.g. the default realisation) it is willing to model;
- Phase 1 – risk differentiation: the model should be able to differentiate the level of risk, i.e. rank the exposures from the least risky to the riskiest one, and assign them to homogenous grades or pools;
- Phase 2 – risk quantification: for each grade or pool, a parameter (e.g. PD) is estimated, based on the past realisations (e.g. default rates).

<sup>[82]</sup> Sub-section 3.1.

**Figure 43: Use of IRB models for determining the IFRS 9 PD in case of Low Default Portfolios**

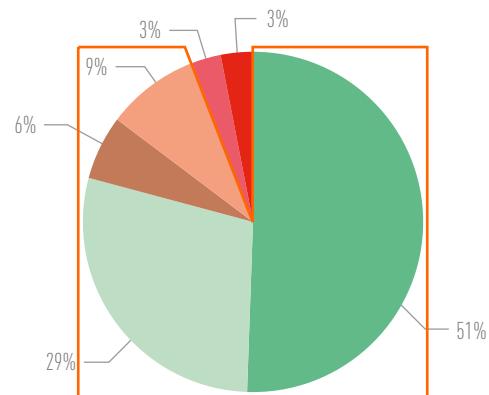


- Used from a risk differentiation and quantification perspective
- Used from a risk differentiation perspective
- Used only from a data/IT perspective
- None or limited use of IRB model

#### 4.3.1. Difference in the definition of default

96. Starting from the deeper phase of the modelling, some differences are already observed in the concept used for estimating the IFRS 9 PD. Indeed, even though for a strong majority of the cases, the IFRS 9 PD is modelled in order to reflect the probability of occurrence of the event of default as defined in line with the EBA GL 2016/17<sup>[83]</sup> (whilst to a different degree of compliance), some institutions reported modelling other events, such as for example an IFRS 9 PL (probability of loss) instead of a PD (probability of default). In this case, it is clear that some variability will be observed, given that all the defaults that did not lead to a loss are excluded from the modelling. In practice, the PL is expected to be lower than the PD (but the LGD is expected to compensate for this effect, i.e. be higher than the LGD) and not surprisingly, these banks resulted as outliers for the purpose of the analysis on the PD.

**Figure 44: PD concept used for the purpose of the ECL estimates**



- Event of default (fully compliant with EBA/GL/2016/07)
- Event of default (partially compliant with EBA/GL/2016/07)
- Event of default and Event of NPE
- Event of default and Event of credit-Impaired (Stage 3)
- Event of credit-Impaired (Stage 3)
- Event of credit loss

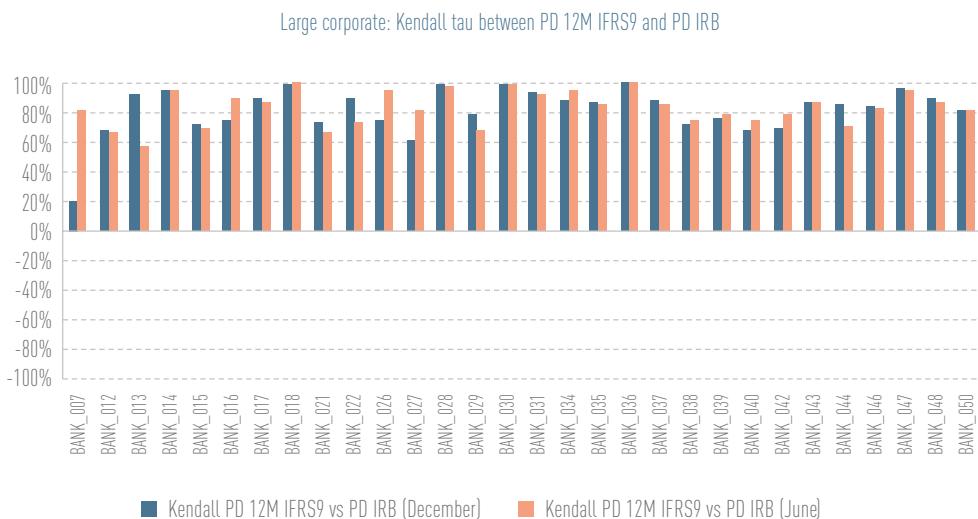
#### 4.3.2. Difference in the risk differentiation

97. In order to measure the differences in the risk differentiation/ranking order between the IRB and the IFRS 9 parameters, several metrics can be used, such as for instance the Kendall tau metric and the correlation. These two metrics are between -1 (complete misalignment of the ranking) and +1 (alignment of the ranking). Annex 4: Kendall tau and correlation presents the technical differences of these metrics and their concrete calculations, but the two indicators point toward the same direction: even though a significant number of institutions argued they were not using the IRB model, the ranking between the IFRS 9 and the IRB parameters is very similar for all the banks<sup>[84]</sup>. This means that most of the IFRS 9 specificities only impact the last phase of the credit-risk modelling, i.e. the risk-quantification phase.

<sup>[83]</sup> EBA Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013.

<sup>[84]</sup> This is because whilst some banks do not use the PD IRB as a starting point per se, the main risk drivers are similar between the IFRS 9 PD and the IRB PD, as can be inferred by the high Kendall tau index.

Figure 45: Kendall Tau between PD IFRS 9 and PD IRB (June and December)



#### 4.3.3. Difference in the risk quantification

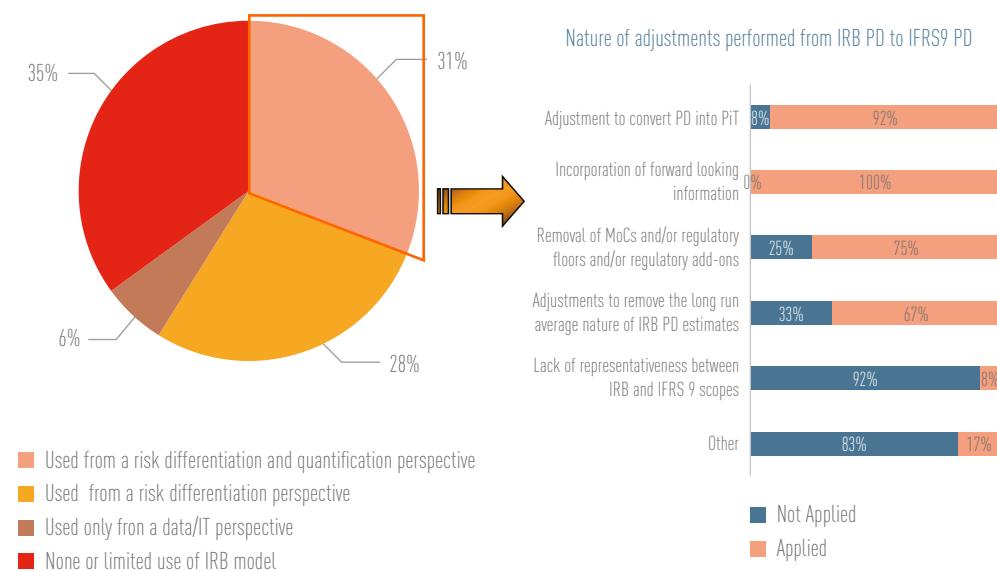
98. Significant differences have been observed, even across those institutions leveraging IRB models to a greater extent<sup>{85}</sup>, in the nature of adjustments applied to the IRB estimates, reflecting the adoption of different practices for estimating the IFRS 9 PD when departing from the PD used for regulatory purposes<sup>{86}</sup>. Indeed, while regulatory measures can be used as a basis to estimate the IFRS 9 12-month PD, they need to be adjusted in order to take into account the differences stemming from the IFRS 9 requirements. In particular, the main

differences deal with the fact that the IFRS 9 12-month PD is calibrated on the basis of a point-in-time approach and incorporate a broad range of information, including forward-looking information. By contrast, the IRB PD shall be representative of long-run experience and includes supervisory add-ons and regulatory adjustments aimed at reflecting, among others, the margin of conservatism. In this regard, the uncertainty related to the forward-looking estimates in the context of the COVID-19 pandemic explains the change in IFRS 9 variability and the stability in the IRB one.

<sup>{85}</sup> Intended as those institutions, using IRB models for determining the IFRS 9 PD also from a risk quantification perspective.

<sup>{86}</sup> See IFRS 9 BC 5.283 ‘The IASB notes that financial reporting, including estimates of expected credit losses, are based on information, circumstances and events at the reporting date. The IASB expects entities to be able to use some regulatory measures as a basis for the calculation of expected credit losses in accordance with the requirements in IFRS 9. However, these calculations may have to be adjusted to meet the measurement requirements in Section 5.5 of IFRS 9.’

Figure 46: Type of adjustments performed on the IRB model in the risk quantification



99. Finally, it is worth pointing out that, despite the high correlation between the IFRS 9 and the IRB PD, as already mentioned before, the quantitative evidence shows that IFRS 9 estimates are characterised by an elevated variability, reflecting the heterogeneity of the IFRS 9 modelling practices and most importantly the broad range of information (including forward-looking information) incorporated into the IFRS 9 PD. Such a trend can be observed from Figure 38, comparing the deviations from the benchmark of the IFRS 9 12-month PD and of the IRB PD as of December 2019 and June 2020. In particular, while the direction of the changes in the PD is broadly consistent between IFRS 9 and IRB<sup>[87]</sup>, the magnitude of the variability is generally not the same between the two

approaches. This pattern is even more evident in June 2020, as a consequence of the larger impact of forward-looking information on the PD estimates.

100. The high degree of judgement involved in the estimate of the IFRS 9 risk parameters and the lack of supervisory validation for the IFRS 9 ECL models increase the importance for competent authorities to gather a thorough understanding of the modelling practices adopted by the different institutions, including the degree of leverage of the data and information used for regulatory purposes and an understanding of the factors that affect the variability in the IFRS 9 estimates in comparison to those used for regulatory purposes.

<sup>[87]</sup> I.e. institutions overestimating IRB PD generally overestimate IFRS 9 PD and vice versa.

## MORE INFO



## WHAT ARE THE MAIN DIFFERENCES BETWEEN THE IFRS 9 AND IRB PD?

Although both IFRS 9 and the regulatory models are based on the recognition of expected losses, significant differences exist between the accounting and the regulatory framework. As a result, whilst the models applied for regulatory purposes may be used as a basis to derive the IFRS 9 PD, some adjustments are needed to the regulatory estimates in order to comply with the requirements of the accounting standard.

In this regard, while under the regulatory framework, expected losses are estimated using a 12-month time horizon, under IFRS 9, a 12-month ECL<sup>(88)</sup> is required only for those exposures that have not experienced a significant increase in credit risk since origination (i.e. Stage 1 exposures); otherwise a lifetime ECL shall be applied (i.e. Stage 2 and Stage 3 exposures).

However, even in the case of the 12-month PD, some differences exist between the IRB and IFRS 9 estimates. In particular, under the regulatory framework, the

12-month PD is determined using long-run average default rates, calculated over an entire economic cycle and, as such, IRB PDs are generally based more through-the-cycle estimates (with some hybrid approaches also used)<sup>(89)</sup>. In addition, the IRB PD also includes specific conservative measures, such as floors and margin of conservatism (MoC) to cover for some uncertainties in the estimates. By contrast, the accounting standard does not prescribe the application of floors in the PD estimates, nor margins of conservatism. Moreover, the IFRS 9 PD is a point-in-time estimate and incorporates a broad range of information, including reasonable and supportable forecasts of future economic conditions. As a consequence of their point-in-time nature and of the incorporation of forward-looking information, IFRS 9 PDs tends to be more sensitive to changes in the economic cycle, compared to regulatory PDs and could be higher than regulatory PD in down-cycle periods.

Table 4: Main differences between IFRS 9 PD and regulatory PD

	IFRS 9 PD	Regulatory PD
Measurement Period	12 months (Stage 1) / Lifetime (Stage 2 and Stage 3)	12 months
Cycle sensitiveness	Point-in-time estimation, incorporating forward looking information and macroeconomic factors	Estimation based on long-run average of one-year default rates [Through the Cycle or hybrid (to some extent)]
Observation period	No specific requirement in the accounting standard	Minimum 5 years
Regulatory floors, adjustments and margin of conservatism	The standard does not prescribe the application of floors in the PD estimates. Moreover, under IFRS 9, the PD should be based on an unbiased estimate	The regulatory framework envisages the inclusion of prudential adjustments and regulatory floors for determining the IRB PD, as well as the application of margins of conservatism to take into account model deficiencies

<sup>(88)</sup> To recall, under IFRS 9, the 12-month ECL is defined as the portion of the lifetime ECL stemming from default events within the 12-months after the reporting date (see IFRS 9 Appendix A).

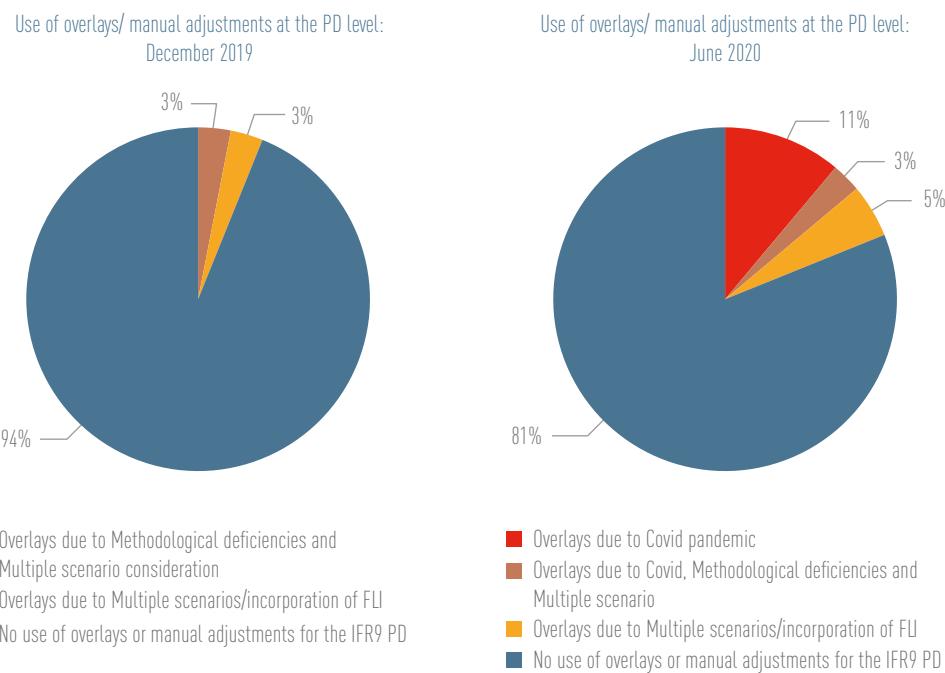
<sup>(89)</sup> Notably, regulatory PDs must be estimated based on the observed long-run average by grade or pool. However, internal estimates must also incorporate all relevant, material and available data, information and methods and a bank's estimates must promptly reflect the implications of new data and other information as it becomes available. In practice, this may lead to regulatory PDs which are not truly TTC but rather of a 'hybrid'-nature, i.e. with characteristics of both, TTC and PiT.

#### 4.4. Use of ECL overlays at the IFRS 9 PD level

101. Only a few institutions reported using temporary adjustments at the level of the IFRS 9 PD for the Large corporate exposure class. In the vast majority of the cases, these adjustments were in-

troduced in the first half of 2020 in order to reflect the implications related to the COVID-19 pandemic and the uncertainty stemming from the macroeconomic context. However, a few institutions mentioned applying some model adjustments even in December 2019 in order to take into consideration model deficiencies or multiple scenario considerations.

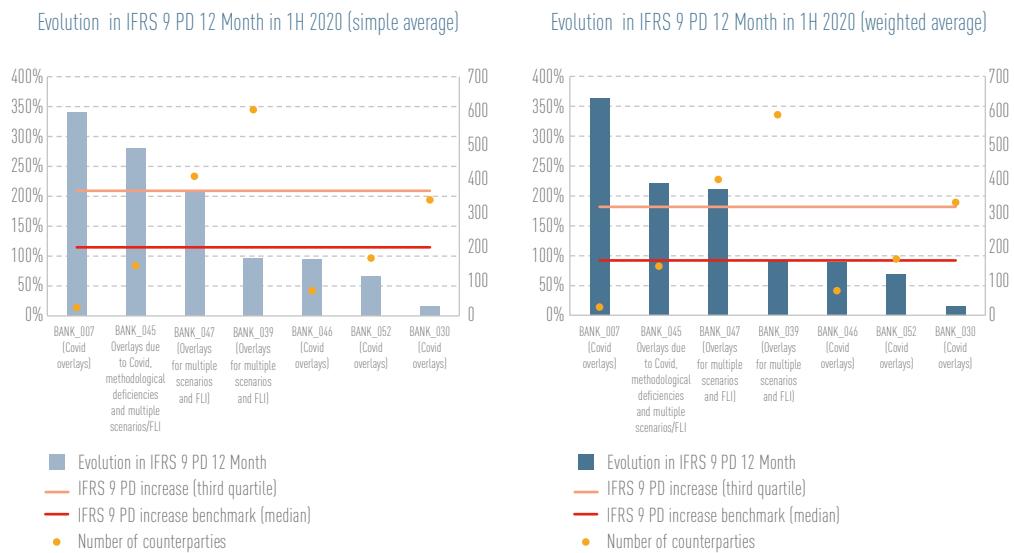
Figure 47: Large corporate: Use of overlays/manual adjustments at the PD level



102. It is worth noting that in almost all the cases, banks reported that these adjustments had a significant impact on the IFRS 9 12-month PD. Nevertheless, for some of them the application of COVID-19 overlays does not seem to have led to a substantial increase in the PD estimates compared to the other

institutions in the sample. Even though this outcome could have been affected by different factors including, inter alia, the number of reported counterparties, it seems to also reflect the lack of harmonisation in the methodology used for determining COVID-19 overlays (see Sub-section 3.3).

**Figure 48: Evolution in the IFRS 9 PD 12 Months for those institutions using overlays/manual adjustments**



103. While, given the unprecedented circumstances of the COVID-19 crisis, the application of temporary overlays could be considered a good practice, it is paramount that supervisors have a good understanding of the methodolo-

gy underlying these overlays in order to assess whether they appropriately reflect the risks to which institutions are exposed and if they are based on sound approaches.

## 5. Incorporation of forward-looking information (FLI)

### KEY TAKEAWAYS



### KEY TAKEAWAYS OF THIS SECTION

Unsurprisingly, in the context of the pandemic, almost all the institutions in the sample have updated the set of forward-looking information (FLI) used for IFRS 9 purposes, in order to take into consideration, *inter alia*, the negative implications stemming from COVID-19 on the economic growth and the impact of the lockdown measures. However, the impact on ECL stemming from the incorporation of FLI, while increased compared to pre COVID situation, varied significantly across the banks in the sample.

With specific reference to the approaches used for incorporating forward-looking scenarios into the ECL measurement, a heterogeneity of practices have been observed across institutions. In particular, whilst the most common approach is to consider three macroeconomic scenarios<sup>(90)</sup>, sometimes a single scenario without any adjustment/overlay to reflect the effect of less likely scenarios is used. This practice deserves further consideration from a supervisory perspective, since using one single scenario would not meet the objective of IFRS 9 unless there is a linear relationship between the different forward-looking scenarios and the associated credit losses of the portfolio, and this is evidenced by a sound and appropriate analysis<sup>(91)</sup>.

Moreover, as a response to the COVID-19 crisis, the majority of the institutions

in the sample changed the range of the IFRS 9 scenarios and/or their probability weights, generally introducing additional and more pessimistic scenarios or assigning a higher probability weight to the original downward scenario. Nevertheless, despite the changes introduced, the IFRS 9 12-month PD estimates are still significantly driven by the assumptions underlying the baseline scenario, raising concerns on the limited degree of the impact from the non-linearity in the multiple macroeconomic scenarios embedded in banks' models. This reinforces the need for supervisors to further investigate the approaches used for incorporating forward-looking scenarios in the ECL measurement, including, *inter alia*, the assumptions underlying the different scenarios and their impact on the final ECL amount.

With specific reference to the forecasting period used for the IFRS 9 scenarios, it was noted that banks generally leverage on a 3-year forecasting horizon, after which, in most of the cases, a gradual reversion to the mean is applied, even though this practice does not seem to be harmonised across EU institutions. However, whilst the approach for estimating the ECL beyond the explicit forecasting horizon has not been modified during the pandemic it was noted that, in some cases, extremely long forecasting periods or approaches involving a reversion to the mean over a long timeframe are used, raising some concerns on whether the information used for the IFRS 9 scenarios can be reasonably supported or considered representative for the purpose of the ECL measurement. Indeed, as the forecasting period increases, the reliability of detailed forecasts decreases, thus the estimates require a higher degree of judg-

<sup>(90)</sup> I.e. a baseline scenario and two alternative scenarios around the baseline scenario (an upward and a downward scenario).

<sup>(91)</sup> See IFRS Transition Resource Group for Impairment of Financial Instruments (ITG) December 2015 and Global Public Policy Committee (GPPC), The implementation of IFRS 9 requirements by banks. Considerations for those charged with governance of systemically important banks, 2016.

ment. At the same time, approaches involving a long mean reversion could result in basing the ECL estimates of information that is not representative or that has little relevance for the long-term horizon.

Furthermore, when assessing the approaches used for the incorporation of FLI, it was noted that in the context of the pandemic, some banks have introduced certain practices that, in their view, were aimed at avoiding excessive variability in the IFRS 9 estimates, but which could lead in turn either to more through-the-cycle ECL estimates compared to the expectations from the accounting standard or to minimise the impact on the ECL measurement stemming from the non-linearity in the IFRS 9 macroeconomic scenarios and, as such, they deserve further scrutiny from supervisors. The practices observed involve in particular:

- a. the introduction of adjustments (smoothing factors) to the relevant

IFRS 9 macroeconomic variables (i.e. GDP) to reflect their average forecast over a pre-determined number of years;

- b. countercyclical changes in the severity of the downward scenarios (e.g. GDP 2021 worst scenario > GDP 2021 best/baseline scenario);
- c. the lack of update in the macroeconomic information (reliance on pre-COVID-19 forecast);
- d. changes in the IFRS 9 scenarios (probability weight or number of macroeconomic scenario) to reduce the impact of worst scenario.

Finally, another area where continuous individual monitoring from a supervisory perspective is of the utmost importance is the interplay between IFRS 9 and internal stress-testing scenarios in order to get a good understanding of the practices in place across institutions, with particular reference to the changes introduced during the pandemic.

## 5.1. Variability in the impact from forward-looking information

MORE INFO



### WHAT IS THE INCORPORATION OF FORWARD-LOOKING INFORMATION IN THE ECL MEASUREMENT?

IFRS 9 requires institutions to measure expected credit losses of a financial instrument in a way that reflects: a) an unbiased and probability weighted amount that is determined by evaluating a range of possible outcomes; b) the time value of the money; and c) reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions<sup>[92]</sup>. In this context, institutions are expected to determine the appropriate time horizon over which to

incorporate detailed forecasts as well as how to estimate ECL for those exposures with a maturity exceeding the forecast period. Moreover, beyond the forecast period, many institutions use a mean reversion technique, which is a specific extrapolation technique that enables reversion from the last point of forecasts to long-term averages constructed on historical data.

That said, while the standard requires evaluating a range of possible outcomes, it prescribes neither the range of economic scenarios to be considered nor the probability weights to be assigned to those scenarios, leaving room for expert

<sup>[92]</sup> See IFRS 9.5.5.18.

judgment from banks<sup>(93)</sup>. Such an aspect has been further discussed by the IFRS Transition Resource Group for Impairment of Financial Instruments (ITG) in December 2015<sup>(94)</sup>. In particular, the ITG noted that using a single forward-looking scenario (as for example, a central economic scenario based on the most likely outcome) would not meet the IFRS 9 objectives when there is a non-linear relationship between the different forward-looking scenarios and their associated credit losses.

In this context, an example of the non-linearity between the ECLs and the relevant economic parameter underlying the forward-looking scenarios can be illustrat-

<sup>(93)</sup> Even though IFRS 9.5.5.18 clarifies that 'When measuring expected credit losses, an entity need not necessarily identify every possible scenario. However, it shall consider the risk or probability that a credit loss occurs by reflecting the possibility that a credit loss occurs and the possibility that no credit loss occurs, even if the possibility of a credit loss occurring is very low.'

<sup>(94)</sup> Transition Resource Group for Impairment of Financial Instruments (ITG) Meeting Summary – 11 December 2015: [link](#)

ed, for instance, by the case of a portfolio of residential mortgages, where:

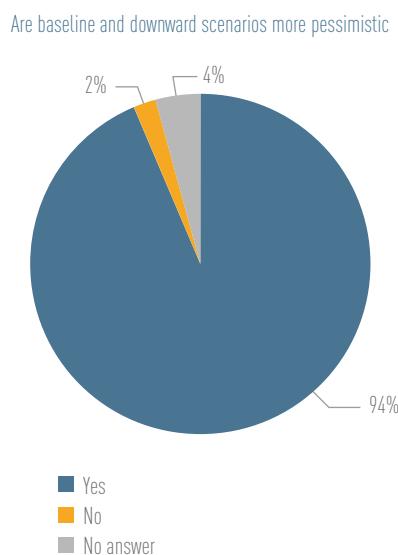
- if property prices fall by 10%, only a 2% increase in ECL is experienced, due to significant remaining over-collateralisation in the portfolio; and
- if property prices decrease by 20%, a 10% increase in ECL is experienced, as significantly more loans become under-collateralised and experience losses.

Indeed, in this case, the expected credit losses do not increase linearly as property values fall, but rather they increase at a greater rate the further property prices fall.

For the sake of completeness, it is worth pointing out that, as a difference compared to IFRS 9, under the US CECL, it is acceptable to use a single-forward-looking scenario, even though anecdotal evidence shows that, in practice, some US banks also apply more than one scenario for the purpose of the ECL measurement.

104. Unsurprisingly, in the context of the pandemic, almost all the institutions in the sample have updated the set of forward-looking information (FLI) used for IFRS 9 purposes, in order to take into consideration, *inter alia*, the negative implications stemming from COVID-19 on the economic growth and the impact of the lockdown measures imposed in the first quarter of 2020.

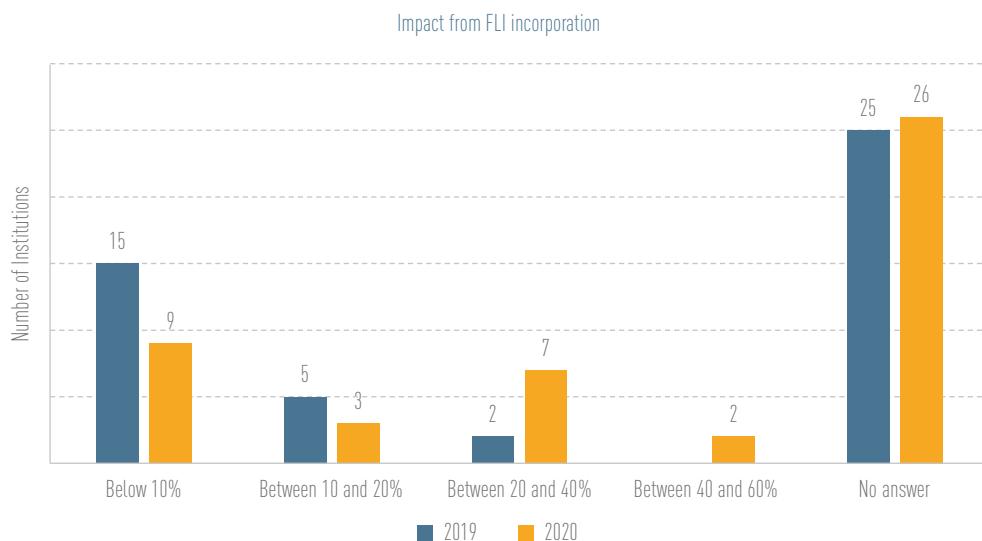
**Figure 49: Institutions revising their baseline and downward scenarios in a more pessimistic manner**



105. However, as shown in the next Figure, the impact on ECL stemming from the incorporation of FLI varies significantly across institutions. In particular, while for some institutions this impact increased significantly in June 2020 compared to December 2019, more than half

of the institutions in the sample were not able to provide an impact assessment of the FLI on the final ECL number, since FLI is incorporated into the models and its impact on the final ECL cannot be assessed separately.

Figure 50: Impact from FLI incorporation into the final ECL number



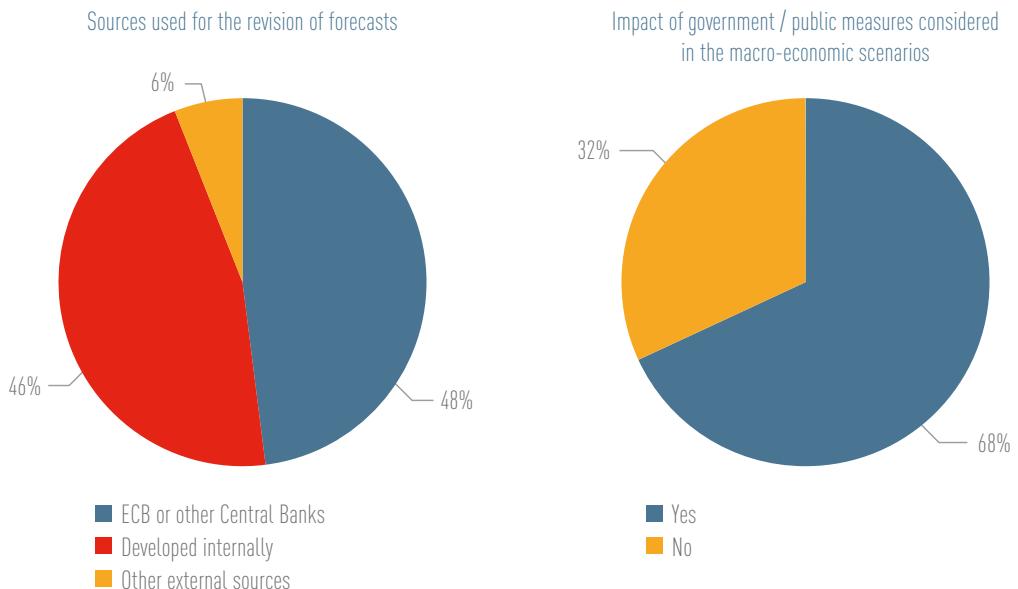
106. In addition, some differences have been observed, *inter alia*, in the following aspects:

- the sources used for retrieving forward-looking information and the consideration given to the public support measures introduced across EU countries in the first half of 2020;
- the approaches used for reflecting in the ECL measurement the non-linearity in the macroeconomic scenarios;
- the practices adopted in the context of the pandemic;
- the different sensitiveness in the IFRS 9 parameters (i.e. PD) to the changes in the macroeconomic variables.

#### 5.1.1. Source of FLI and in consideration of public support measures

107. The source used for retrieving the forward-looking information varied across institutions. In particular approximately half of the banks in the sample used the economic forecast published by the relevant national central banks or by the ECB as an anchor point for developing their forward-looking scenarios, while remaining institutions leveraged the forecast developed by their internal departments or from other external sources, incorporating different assumptions on the impact of the crisis and on the beginning of the economic recovery. Moreover, one third of the institutions did not consider the impact of public support measures when revising their macroeconomic scenarios.

**Figure 51: Sources used for macroeconomic forecast and consideration of the impact of public measures**



108. Given the uncertainty in the current economic context, it could be considered a good practice to compare and challenge the different forecasts available (e.g. those developed internally and those provided by the relevant national central banks or by the ECB) in order to avoid the use of overly optimistic assumptions and to assess whether the information being used is reasonable and supportable.

#### 5.1.2. Approaches used for taking into account the non-linearity in the macroeconomic scenarios

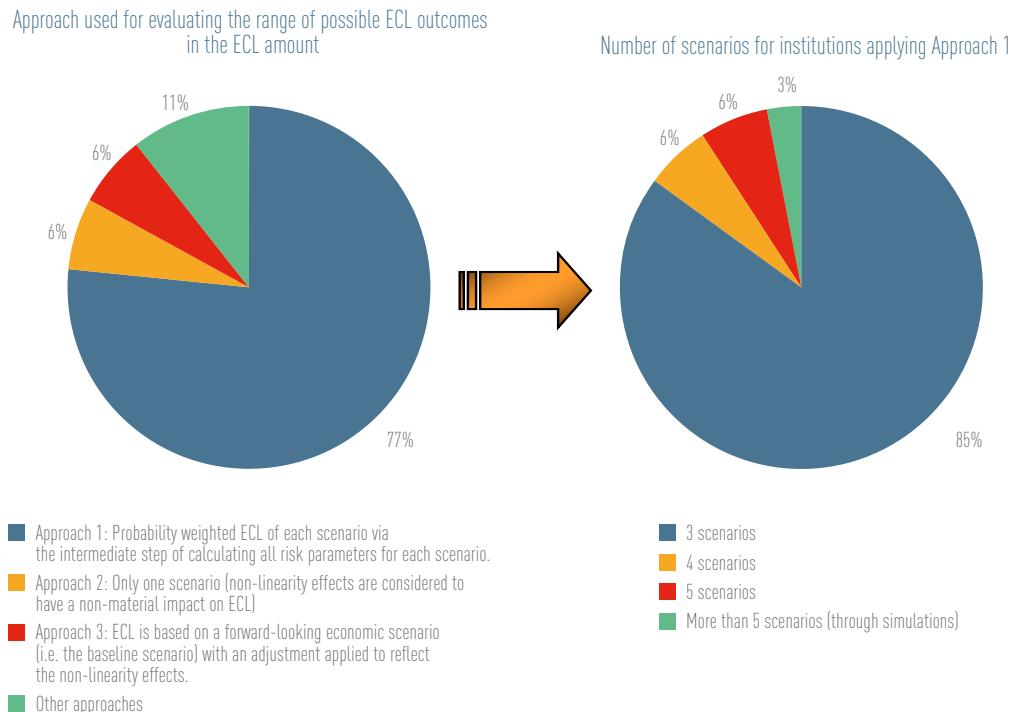
109. As shown in Figure 52, different practices have been observed across EU institutions for the purpose of incorporating forward-looking scenarios into the ECL measurement. The most common approach is to consider three macroeconomic scenarios (i.e. one baseline scenario and two alternative scenarios around the baseline scenario – upward and downward), while only a few institutions mentioned adopting Monte Carlo

simulations, which involve the use of a distribution of a large number of scenarios around the baseline.

110. In addition, some banks mentioned using only a single forward-looking scenario (i.e. the most likely scenario). While this practice is generally associated with the adoption of an adjustment to reflect non-linearity in the credit loss distribution for alternative scenarios, surprisingly a few banks in the sample reported not applying this type of adjustment. In this regard, considering only a single forward-looking economic scenario with no separate adjustments to take into account non-linear impacts would not meet the objective of IFRS 9 unless there is a linear relationship between the different forward-looking scenarios and the associated credit losses of the portfolio, and this is evidenced by a sound and appropriate analysis <sup>(95)</sup>. Moreover, given the uncertainties due to the COVID-19 crisis, this is not considered a good practice in the current economic context.

<sup>(95)</sup> See IFRS Transition Resource Group for Impairment of Financial Instruments (ITG) December 2015 and Global Public Policy Committee (GPPC), The implementation of IFRS 9 requirements by banks. Considerations for those charged with governance of systemically important banks, 2016.

Figure 52: Approach used for evaluating the range of possible outcomes in the ECL amount (%)

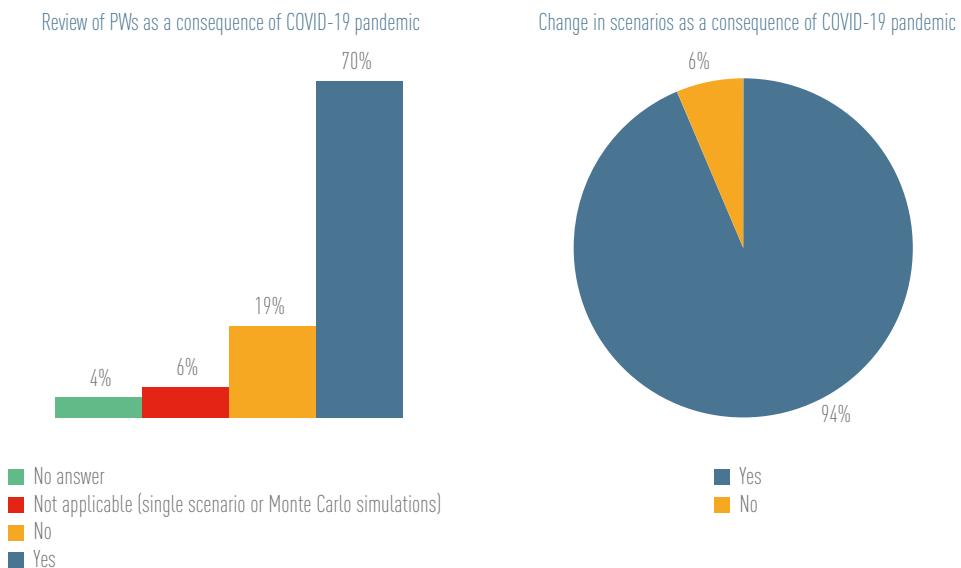


(%) Based on the information collected as of December 2019.

111. To note, as a response to the COVID-19 crisis, the majority of the institutions in the sample changed the range of the IFRS 9 scenarios and/or their probability weights, generally introducing addi-

tional and more pessimistic scenarios or assigning a higher probability weight to the original downward scenario, even though some relevant exceptions were observed (see Sub-section 5.1.3).

Figure 53: Changes in the range of scenarios and in their probability weights as a response to the pandemic



112. As a consequence of the changes introduced, the probability weight applied to the downward scenario slightly increased in June 2020 (on average, between 5 and 6 basis points for LDPs and HDPs, respectively). Moreover, the probability weight assigned to the baseline scenario slightly decreased, while remaining on average still around 56% for both LDPs and HDPs<sup>[97]</sup>.

**Figure 54: Average weights assigned to the 3 macroeconomic scenarios (LDPs)**

LDP: Large Corporates	Number of institutions using 3 scenarios: 31	
	Weight 2019 Average	Weight 2020 Average
Upward scenario	18%	18%
Baseline scenario	59%	56%
Downward scenario	23%	29%

**Figure 55: Average weights assigned to the 3 macroeconomic scenarios (HDPs)**

HDP: L&A Households	Number of institutions using 3 scenarios: 36	
	Weight 2019 Average	Weight 2020 Average
Upward scenario	19%	17%
Baseline scenario	59%	56%
Downward scenario	23%	28%

113. However, despite the changes introduced, as can be inferred from Figure 57 and Figure 58, the impact on the IFRS 9 PD stemming from the non-linearity of multiple macroeconomic scenarios remained quite limited, whilst slightly increasing in June 2020, as a result of the higher uncertainty in the economic outlook. In particular, with specific reference to the bucket 0-12 months, the

impact of non-linearity in the scenarios on the 12-month PD was on average around 7% in June 2020 (4% as of December 2019). This seems to indicate that the IFRS 9 PD estimates are still significantly affected by the assumptions underlying the baseline scenario, raising concerns on the limited degree of non-linearity impacts embedded in banks' models. Moreover, as shown in the next Figure, the application of a 100% probability weight to the most downward scenario would result in an increase in the ECL amount recognised in the first half of 2020 on average around 20%, which is surprisingly low.

**Figure 56: Impact on the total ECL recognised in the reference period when applying 100% probability weight to most upward and downward scenarios**

Answering: 41 Institutions	Impact in ECL when applying probability of 100% to...	
	Average 2019	Average 2020
... the most upward scenario	-13%	-12%
... the most downward scenario	18%	22%

114. This evidence reinforces the need for supervisors to further investigate the approaches used for incorporating forward-looking scenarios into the ECL measurement, including, *inter alia*, the assumptions underlying the different scenarios and their impact on the final ECL amount. In this context, consideration should be given, in particular, to the scrutiny of the severity of the assumptions underlying the downward scenarios, in order to assess whether they appropriately reflect the risk of a further deterioration in the macroeconomic outlook and that they do not include overly optimistic assumptions on the expected recovery.

[97] Based on average weights assigned to the 3 macro-economic scenarios. The median weights assigned to the 3 macro-economic scenarios are even more consistent between HDPs and LDPs: for both reference dates and portfolios, a 20% weight has been assigned to the downward scenario, 60% to the baseline scenario and 23% and 25% for December 2019 and June 2020.

Figure 57: Ratio between WA PD and PD baseline Box plot with 25th, 50th and 75th percentiles (December 2019)

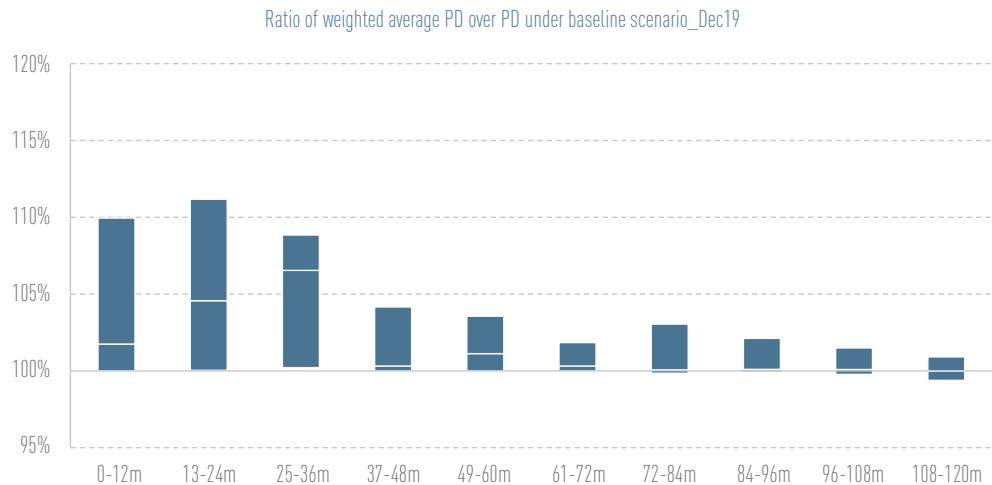
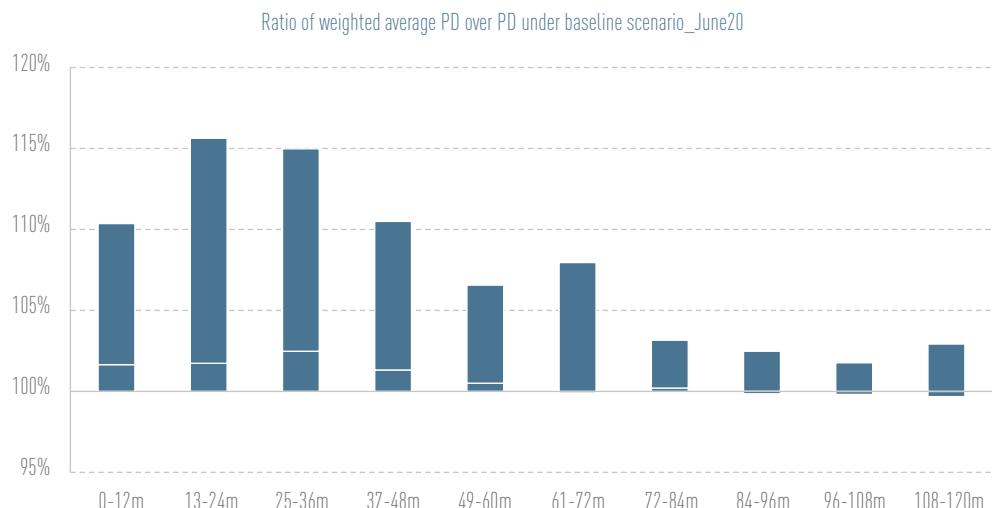


Figure 58: Ratio between WA PD and PD baseline Box plot with 25<sup>th</sup>, 50<sup>th</sup> and 75<sup>th</sup> percentiles (June 2020)



115. For the sake of completeness, it is worth pointing out that the impact of multiple scenarios on the PD estimates varies over time depending on the length of banks' forecasting period and the methodology used for estimating ECL beyond it. In this regard, while a heterogeneity of practices has been observed, overall, the forecasting period used by the majority of banks in the sample is 3 years. After that, a gradual reversion to the mean is generally applied, even though this practice does not seem to be harmonised across EU institutions. The approach for estimating the ECL beyond the (explicit) forecasting horizon has not been modified during the COVID pandemic by the institutions in the sample.

116. However, certain institutions rely on extremely long forecasting periods <sup>[98]</sup> or apply approaches involving a reversion to the mean over a long timeframe. These practices raise some concerns on whether the information used for the IFRS 9 scenarios can be reasonably supported or considered representative. Indeed, as the forecasting period increases, the reliability of detailed forecasts decreases, thus the estimates require a higher degree of judgment. At the same time, approaches involving a long mean reversion could result in basing the ECL estimates on information that is not representative or that has little relevance for the long-term horizon.

<sup>[98]</sup> In some cases even 8 years.

## METHODOLOGY



## METHODOLOGICAL APPROACH

This analysis focuses on how the evaluation of a range of future economic conditions (multiple scenarios) is impacting the PD IFRS 9 estimates by default horizon. Particularly, the analysis aggregates the information at institution level, by default horizon (without any differentiation at exposure class level, i.e., Large corporates, Institutions and Sovereigns are all within the scope of this analysis). To achieve the previous goal, for each institution, counterparty and default horizon, the ratio between the weighted average IFRS 9 PD (probability weighted average over multiple economic scenarios) and the IFRS 9 PD under the baseline scenario is computed. Once this value is calculated, for each institution, the average ratio over all its counterparties is computed. By construction, this analysis shows the effect of the multiple scenarios in the PD estimates. The higher the value of the metric,

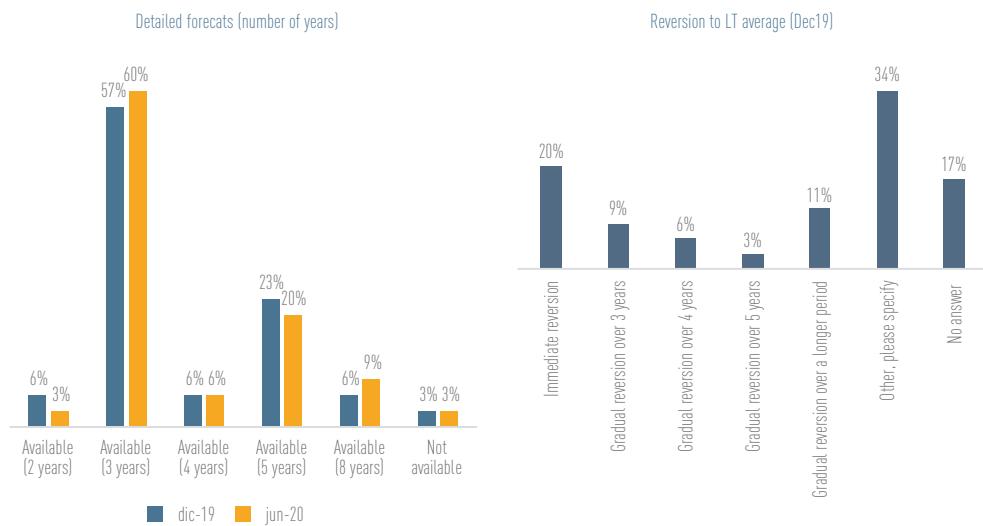
the higher the effect of multiple scenarios with respect to the baseline level.

The following considerations must be taken into account when interpreting the results:

1. Results are shown taking into consideration marginal probability of defaults (i.e., probability of default from 0-12 months since the reporting date, probability of default from 12-24 months since the reporting date, and so on);
2. No minimum thresholds of counterparties by institutions is set;
3. No benchmark values are computed for this analysis.

Finally, it is worth noting that compensation effects between counterparties within the same institution might affect the results.

Figure 59: Detailed forecasting period and reversion to long-term average



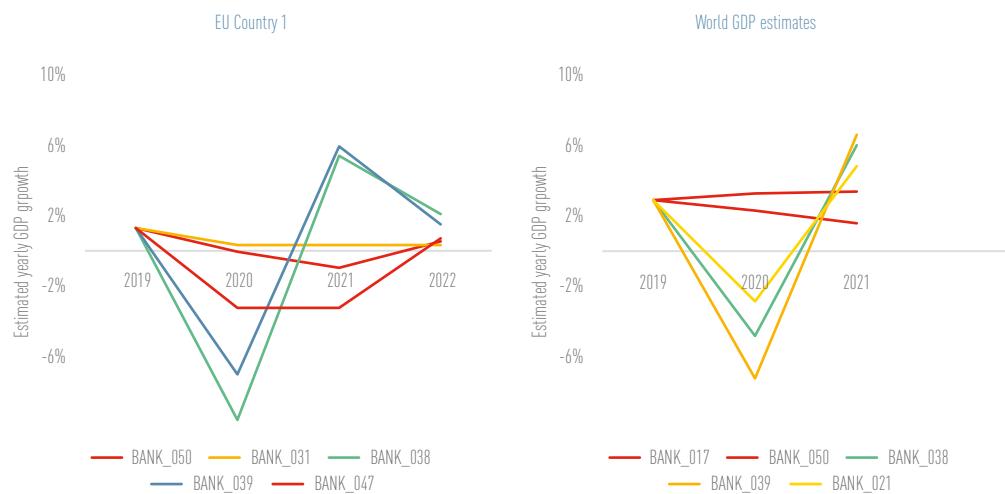
### 5.1.3. Diverging practices introduced in the context of the pandemic

117. During the pandemic, several institutions revised their ECL models or introduced some practices, that, in their view, were aimed at avoiding excessive variability in the IFRS 9 estimates, but that deserve further scrutiny from a supervisory perspective, given their implications on the ECL measurement. The practices observed mainly dealt with the following:

#### A. Application of smoothing factors to the IFRS 9 macroeconomic variables

118. This approach involves the inclusion of adjustments to the macroeconomic variables underlying the IFRS 9 scenarios to reflect their average forecast over the next 2-3 years, with the aim of smoothing their impact on the ECL. The implications stemming from the introduction of these adjustments are evident from Figure 60. Not surprisingly, those institutions applying this approach generally presented a lower increase in the IFRS 9 12-month PD in June 2020, even in comparison to other institutions of the same country.

**Figure 60: Changes in GDP growth for those institutions applying smoothing factors (in red) in comparison to the other banks in the sample [99]**



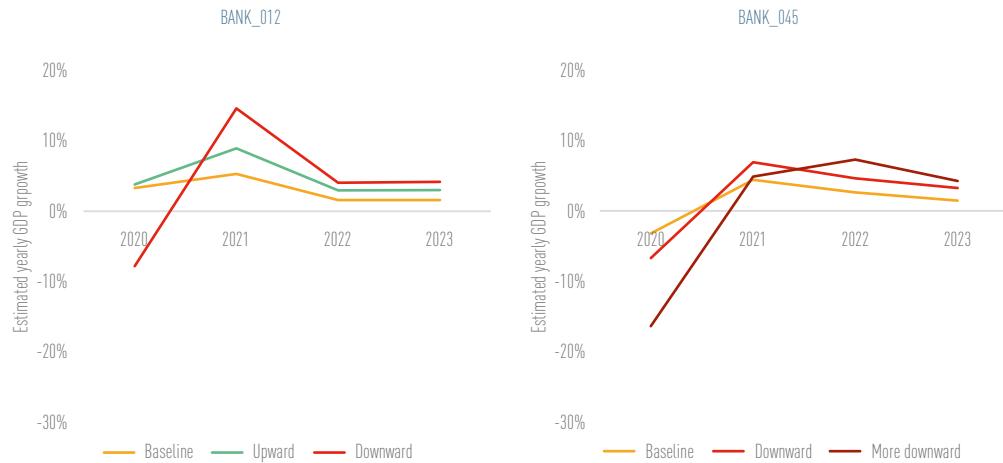
#### B. Countercyclical changes in the severity of the assumptions between the upward and downward scenarios

119. Under this practice, a countercyclical change is assumed in the severity of the assumptions underlying the downward scenario, with the latter resulting more optimistic than the baseline and the upward scenarios during the economic growth. The rationale behind this

approach is that the worse the assumptions have been under the downturn, the more favourable they will be during the upturn. As lifetime PD curves are cumulative, switching downturn scenarios against upward scenarios cancels out the impact of differentiating between downturn and upturn scenarios. Moreover, there is a risk that any impact of non-linearity is cancelled out.

[99] For the sake of clarity, it is worth pointing out that the case of EU Country 1 has been presented in this figure only for illustrative purposes, since the use of smoothing factors has been observed also in the case of institutions located in other EU Countries.

**Figure 61: Example of institutions presenting an inversion in the severity of the forecast of the downward scenario**

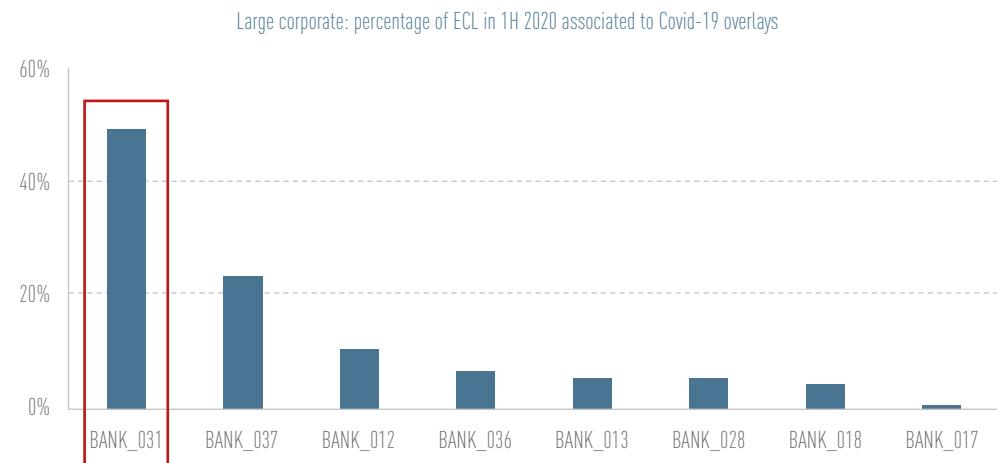


### C. Reliance on pre-COVID-19 forecasts

120. Furthermore, one institution in the quantitative sample, while applying COVID-19 overlays at the ECL level, did not revise the assumptions underlying the IFRS 9 scenarios, given the uncertainty of the macroeconomic con-

text [100]. Not surprisingly, a small increase in the IFRS 9 PD estimates was observed for this institution in comparison to the other banks in the sample. Moreover, the increase in the ECL recognised in the first half of 2020 was significantly driven by the effect of the COVID-19 overlays.

**Figure 62: Large corporate: Impact on ECL amount associated with COVID-19 overlays**



### D. Changes in the range of IFRS 9 scenarios and in the associated probability weights to reduce the impacts stemming from the downward scenario

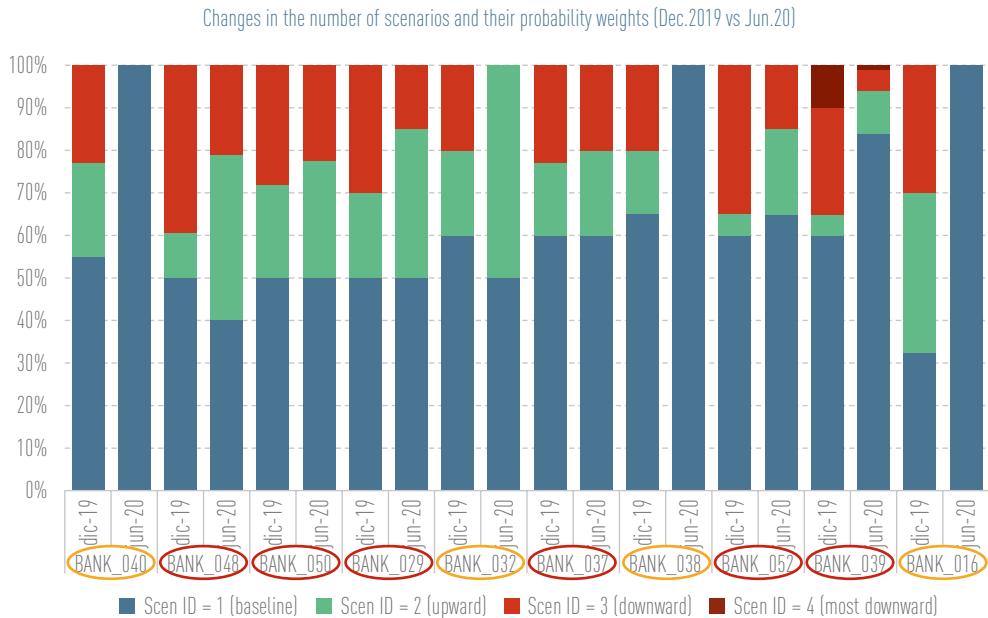
121. When revising the IFRS 9 scenarios in response to the COVID-19 crisis, banks generally introduced additional

and more pessimistic scenarios or assigned a higher probability weight to the downward scenarios. However, with reference to approximately 30% of the institutions in the sample, some relevant exceptions have been observed, mainly dealing with situations where:

[100] While updating the relative probability weights in order to take into consideration the negative implications stemming from the Covid-19 crisis.

- i. the probability weight associated with the downward scenario has been decreased, while increasing that assigned to the baseline or the upward scenarios;
- ii. the range of macroeconomic scenarios used for IFRS 9 purposes has been revised by reverting to a single scenario or by associating to the baseline scenarios only more favourable scenarios;
- iii. the range of the scenarios or in their probability weight changes over time during the forecast period, in order to give more consideration to the less favourable scenarios only during the upturn.

**Figure 63:** Examples of changes in the range of the IFRS 9 scenarios and in their probability weight for the sample of banks participating in the second ad hoc exercise <sup>[101]</sup>



<sup>[101]</sup> Banks with red circles assigned less probability weight to the downward scenario, whereas banks highlighted in orange changed the number of macroeconomic scenarios from December 2019 to June 2020, in light of the COVID-19 uncertainty.

## E. Assessment of the observed practices

122. While, based on the information available, it was not possible to appreciate, from a quantitative perspective, the impact on the ECL amount stemming directly from these practices, as mentioned previously, such approaches deserve further consideration from a supervisory perspective. Indeed:

- The use of smoothing macroeconomic variables reduces the sensitivity of the IFRS 9 parameters to the changes in the macroeconomic outlook, providing limited consideration to the short term implications of the COVID-19 crisis on the economy. This could lead, in turn, to more through-the-cycle ECL estimates

compared to the expectations from the accounting standard <sup>[102]</sup>. In addition, supervisors should be vigilant on possible cherry-picking behaviours where the sensitivity is increased in upturns and decreased in downturns. Consistency in approaches over times is envisaged.

- Countercyclical swings between the downwards and the upward scenarios would minimise/neutralise the impact on the ECL measurement stemming from the non-linearity in the forward-looking macroeconomic scenarios.

<sup>[102]</sup> In this regard, it is worth noting that according to IFRS 9 BC5.282 '[...] through-the-cycle approaches consider a range of possible economic outcomes instead of those that are actually expected at the reporting date. This would result in a loss allowance that does not reflect the economic characteristics of the financial instruments at the reporting date.'

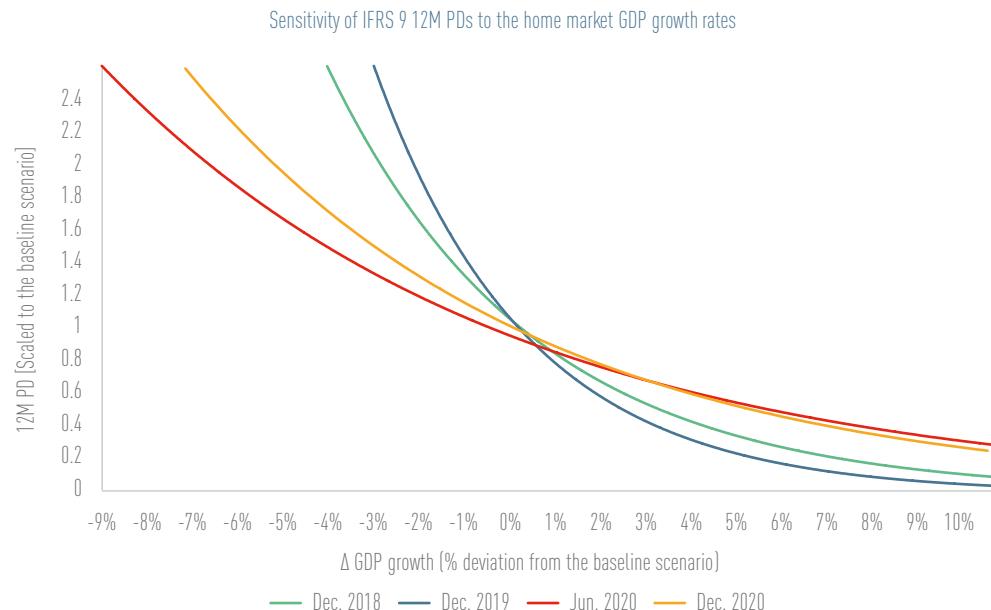
- Practices involving the mechanistic decrease in the probability weight of the downward scenario during the downturn or the application of a higher probability only when the economy is in expansion would artificially stabilise ECLs (reducing the information relevance for stakeholders) and underestimate the risk of a further deterioration of the economic outlook. Further supervisory scrutiny is also needed in those cases of banks reverting to one single scenario or using approaches that take into account only more optimistic scenarios compared to the baseline, in order to assess the rationale behind these practices and their implications on the ECL measurement, as well as to what extent these approaches appropriately reflect the high degree of uncertainty stemming from the COVID-19 pandemic.

123. Finally, it is worth recalling that forward-looking information is a crucial aspect of IFRS 9 modelling and the uncertainty connected to the current economic context cannot be considered an appropriate justification for not updating the macroeconomic scenarios used for IFRS 9 purposes, even when overlays or manual adjustments are used.

#### 5.1.4. Sensitiveness of IFRS 9 PD to the changes in the macroeconomic variables

124. The quantitative evidence collected seem to confirm that institutions adjusted their modelling approaches in order to reduce the impact of the macroeconomic outlook on the ECL. This may be explained by the unique features of this crisis, including the unprecedented public support. Indeed, as highlighted in Figure 64, the sensitiveness of the IFRS 9 12-month PD to the changes in the macroeconomic variables (i.e. GDP growth) significantly decreased in 2020 in comparison to December 2018 and 2019.

Figure 64: Sensitiveness in the IFRS 9 12-month PD to the GDP growth



To note, the lines in the previous Chart show the average macroeconomic sensitivities of banks' IFRS 9 12-month PDs at different reporting dates from December 2018 (green line) to December 2020 (orange line). The steeper the line is, the more sensitive the PD to the macroeconomic outlook, meaning that a given change in GDP translates into a higher change in PD. As visible in the trend line, during COVID-19 crisis, the estimated IFRS 9 12M PD is less sensitive to the changes in the GDP growth compared to the pre-COVID-19 times' (i.e. December 2018 and December 2019).

## METHODOLOGY



## METHODOLOGICAL APPROACH

This analysis aims at capturing the sensitivities of the IFRS 9 PD to the macroeconomic variables, focusing on the GDP growth of the jurisdiction of the institution under consideration. Following this rationale, for those institutions reporting more than one scenario, an average PD scaling factor for the common counterparties reported is computed, for each macroeconomic scenario reported. The PD scaling factor is the baseline PD (i.e.,

$$\text{the Scaled}_{\text{PD}} = \frac{\text{PD}_{\text{scenario}_x}}{\text{PD}_{\text{scenario}_{\text{baseline}}}}, \text{ without any}$$

differentiation at portfolio level (i.e., it includes Large corporates, Institutions and

Sovereigns). In addition, the GDP is scaled to the baseline GDP estimate (i.e., the  $\text{Scaled}_{\text{GDP}} = \text{GDP}_{\text{scen } x} - \text{GDP}_{\text{Baseline scenario}}$ .) The 12M  $\Delta$  GDP growth estimates are compared with the average ratio of the scaled PDs, associated with each scenario.

Finally, the average ratios and the 12M  $\Delta$  GDP growth estimates for each scenario are aggregated into a single curve, depicting the relationship between the PD scaling factors and the GDP growth estimates.

## 5.2. Interplay between IFRS 9 and internal stress test

## MORE INFO



## HOW ARE SCENARIOS DESIGNED IN THE CONTEXT OF INSTITUTIONS' STRESS TESTING?

As regards institutions' stress testing, in order to ensure a convergence of practices across the EU, EBA has developed guidelines focusing on designing and conducting a stress-testing programme [103]. These guidelines set a basis for the development of stress-testing frameworks by providing guidance on the following concepts: (i) the taxonomy of stress testing; (ii) the description of types of stress-test exercises; (iii) the reverse stress-testing process; and (iv) additional issues considered important in the context of the stress-testing programme.

In light of the analysis on the interaction between IFRS 9 and internal stress testing conducted within the IFRS 9 monitor-

ing exercise, some areas of these EBA Guidelines are of particular relevance and, therefore, they are referred to in this report. One of such areas is described in the section dedicated to scenario analysis. Following the provisions included in this part of the guidelines, institutions should consider scenario analyses as a core part of their stress-testing programmes. In this vein, further guidance is provided on the details of the design of these scenarios and their ranges. In addition, the EBA Guidelines set minimum requirements for stress-test scenarios in order to reflect, inter alia, the main risk factors, major institution-specific vulnerabilities including regional and sectoral characteristics, coherent narrative reflecting also forward-looking development of the risk factors, etc. It is also pointed out that

<sup>[103]</sup> Final Report on Guidelines on Institutions' Stress Testing (EBA/GL/2018/04): [link](#)

dynamic interdependences, system-wide dynamics as well as adverse dynamics should be taken into consideration.

Another part of the EBA Guidelines particularly important in the context of the analysis conducted is related to the severity of scenarios. In line with the Guidelines, stress testing should be based on severe, but plausible, scenarios. It is also expected that the degree of severity reflects the purpose of the stress test. Various degrees of severity should be considered for both sensitivity analysis and scenario stress testing while covering at least one severe economic downturn for the assessment of capital adequacy and capital planning purposes. It is also highlighted that the severity should reflect specific institution's vulnerabilities and that institutions should develop their own scenarios and not depend on those provided by supervisors.

With regard to reverse stress testing<sup>[104]</sup>, the EBA Guidelines state that it should be performed as part of the stress-testing programme and carried out on a regular basis. In addition, scenarios which are identified during the reverse stress testing should be included in the range of stress-test scenarios of the relevant institution. Reverse stress-test scenarios can also be considered useful for assessing the severity of the ICAAP and ILAAP scenarios. At the same time, the severity of reverse stress-test scenarios can be assessed by comparison with other scenarios (e.g. historical ones, supervisory and publicly available ones). In addition to that, the EBA Guidelines provide further elaborations on the use of reverse stress testing, also in the context of recovery actions and planning.

Besides the EBA Guidelines on the institutions' stress testing, the EBA has developed the Guidelines on internal governance<sup>[105]</sup> which also pertain to the use of

<sup>[104]</sup> The definition of reversed stress testing as used in the EBA Guidelines on institutions' stress testing (EBA/GL/2018/04): 'Reverse stress test means an institution stress test that starts from the identification of the pre-defined outcome (e.g. points at which an institution business model becomes unviable, or at which the institution can be considered as failing or likely to fail in the meaning of Article 32 of Directive 2014/59/EU) and then explores scenarios and circumstances that might cause this to occur. (...)

<sup>[105]</sup> EBA Guidelines on internal governance (EBA/GL/2017/11): [link](#)

scenarios and their assessment. In particular, within the section focused on the Committees of the management body in its supervisory function, as part of its role, a risk committee is expected to conduct a review of a number of possible scenarios, including stressed scenarios, in order to understand how the institution's risk profile would react to certain external and internal events.

In addition to that, among the provisions on the risk management framework, the EBA Guidelines specify that institutions should develop appropriate methodologies when identifying and measuring or assessing risks, including both forward-looking and backward-looking tools. In this context, these tools are expected to include the 'assessment of the actual risk profile against the institution's risk appetite, as well as the identification and assessment of potential and stressed risk exposures under a range of assumed adverse circumstances against the institution's risk capacity. The tools should provide information on any adjustment to the risk profile that may be required. Institutions should make appropriately conservative assumptions when building stressed scenarios'<sup>[106]</sup>.

The EBA has also published the Guidelines on ICAAP and ILAAP information collected for SREP purposes which foresees the communication to competent authorities of the specification of the scenario assumptions and key macroeconomic variables, including the description of how reverse stress tests have been used to calibrate the severity of scenarios used<sup>[107]</sup>.

Competent authorities review and assess institutions' stress-testing programmes and their compliance with the requirements of the EBA Guidelines on institutions' stress testing, by performing a qualitative assessment of stress-testing programmes, as well as a quantitative assessment of the results of stress tests. Competent authorities challenge the choice and use of scenarios, assumptions and the outcomes of institutions' stress

<sup>[106]</sup> Para.140, Chapter 17 'Risk management framework' of the EBA Guidelines on internal governance (EBA/GL/2017/11)

<sup>[107]</sup> EBA Guidelines on ICAAP and ILAAP information collected for SREP purposes: [link](#)

tests performed for ICAAP and ILAAP purposes by using, where appropriate, the outcomes, scenarios and assumptions from supervisory stress tests, including stress-test exercises carried out by the EBA, the IMF and the ESCB/ESRB. If competent authorities identify deficiencies in the design of the scenarios or assumptions used by institutions, they may

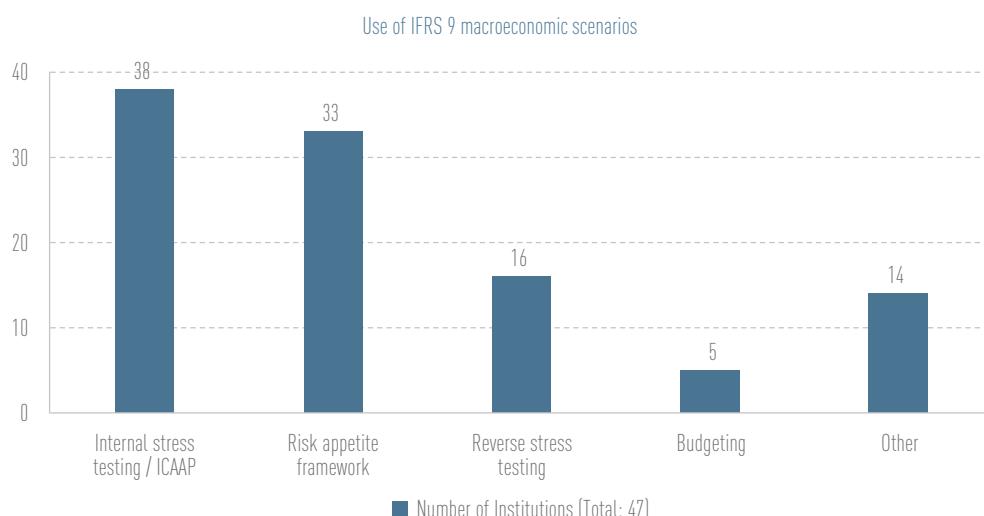
require institutions to re-run their stress tests (or some specific parts of it) using modified assumptions or specific prescribed scenarios (e.g. the anchor scenarios defined in the EBA Guidelines on institutions' stress testing) [108].

[108] EBA on common procedures and methodologies for the supervisory review and evaluation process (SREP) and supervisory stress testing: link

125. IFRS 9 macroeconomic scenarios were also considered in calculations or used to compare the results obtained for other purposes. The majority of institutions in the sample (81%) stated that they consider IFRS 9 scenarios for their internal stress tests and/or ICAAP. In some of these cases, both IFRS 9 baseline and downside scenarios are considered, while in some others only the downside scenario is taken into account. Some of the few remaining institutions have mentioned that, while IFRS 9 scenarios are not used for internal stress tests /

ICAAP purposes, these methodologies are fully aligned. In addition, almost 75% of the institutions consider IFRS 9 scenarios in their risk appetite framework, whereas some others use them for the reverse stress testing or budgeting purposes (34% and 11% of the institutions, respectively). There were also some individual cases reported where these scenarios are leveraged while preparing the recovery plan, financial plan/strategy, sector-specific stress tests or COVID-19 scenarios sensitivity analysis.

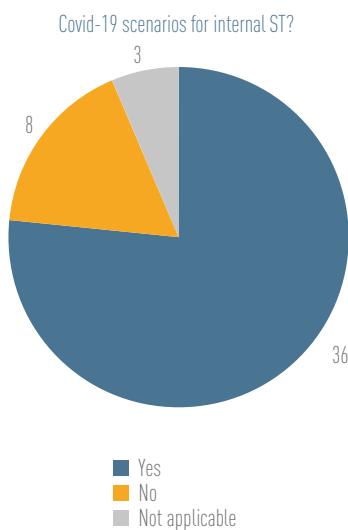
Figure 65: Current use of IFRS 9 macroeconomic scenarios for other purposes



126. As regards the use of COVID-19 scenarios for internal stress tests / ICAAP, the vast majority of the institutions (77%) has been considering them. On the contrary, 23% of the institutions mentioned that no new COVID-19 scenarios will be considered for internal stress-testing purposes (or indicated 'not applicable'),

although the majority of them (17%) mentioned that the necessary assumptions will be considered in the existing scenarios. Twenty-five percent of these institutions that have been considering COVID-19 scenarios for this purpose have stated that the associated impact would be significant.

Figure 66: COVID-19 scenarios used for internal stress testing



127. In terms of methodologies followed, many different approaches were reported. Below, there are a few examples for selected institutions:

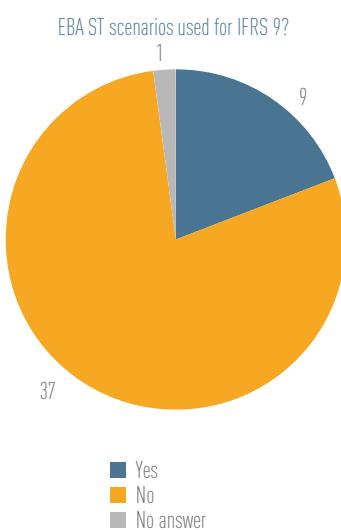
- Baseline and adverse scenarios incorporated a COVID-19 shock (2020 recognition) followed by a U-shaped and L-shaped recovery, respectively.
- COVID-19 scenario (when compared to previous scenarios) considers a sharper fall of the real economy in 2020 but also a faster rebound.
- Three scenarios incorporating COVID-19 impact: updated baseline, U-shaped adverse instead of 'downside' and L-shaped adverse instead of 'adverse'.
- Baseline scenario in V-shape considering a unique lockdown; mild adverse scenario in W-shape considering a new lockdown at the beginning of 2021; adverse scenario in W-shape predicting a new lockdown at the beginning of 2021 plus sovereign tension.

128. As regards the consideration of the EBA stress test macroeconomic assumptions in the scenarios used for the IFRS 9 ECL modelling, 19% of the institutions reported this practice while the vast majority stated that they do not use the EBA stress-test scenarios for this purpose:

- 47% of the institutions follow an independent process and develop their scenarios internally;
- 17% of the institutions reported that the IFRS 9 scenarios consider additional adjustments (particularly because at the time of the survey conducted for the purpose of this report – Q3 2020 – the pandemic event was not yet incorporated);

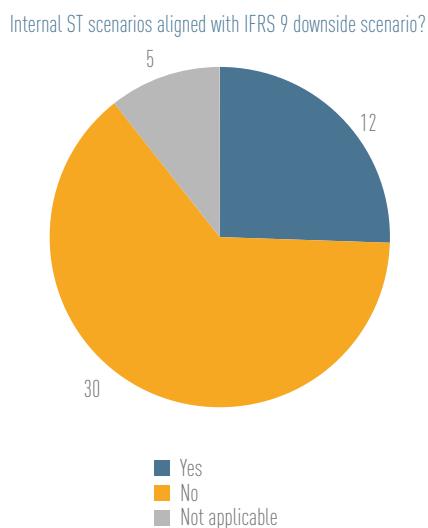
- 6% of the institutions have taken into account the ECB macroeconomic assumptions;
- Few institutions consider that EBA scenarios are not representative, do not have a downward scenario for IFRS 9 purposes or do not consider stress-test scenarios as applicable for the IFRS 9 calculations. The timing of the EBA stress-test scenario update prevented institutions from considering it for IFRS 9 modelling purposes.

Figure 67:EBA stress-test scenarios vs IFRS 9 scenarios



129. As regards the alignment between internal stress tests and IFRS 9 downside scenario, it was observed that for 64% of the institutions these scenarios are not aligned.

Figure 68: Internal stress-test scenarios vs IFRS 9 scenario



130. In relation to the comparison of level of severity between IFRS 9 and internal stress-testing scenarios, around 66% of the institutions in the sample reported that IFRS 9 scenarios are less severe, while around 15% stated that these levels are the same, out of which almost 50% of them also reported having introduced some adjustments to the macroeconomic variables underlying the IFRS 9 scenarios to reflect their average forecast (i.e. smoothing factors).
131. The interplay between IFRS 9 and internal stress test is an area where continuous individual monitoring from a supervisory perspective is of the utmost importance. Discussion on the interplay between IFRS 9 scenarios and internal stress tests should be done on a regular basis in order to get a good understanding of the practices in place. Modifications brought with the COVID-19 crisis should be assessed in-depth. Lack of adaptation of the processes previously implemented should also be well understood. Governance and internal controls processes should be robust enough to ensure that all the relevant bodies are well-informed on a timely basis to take management decisions on this matter. A good quality level of documentation detailing the technical assumptions taken along those processes is key.

### 5.3. Frequency in the update of forward-looking information

132. In general, banks update their forward-looking information, used to measure ECL, on a regular basis. Most do so on a quarterly basis, while one-third of the banks indicate they review FLI on a less-frequent basis (either semi-annually or annually, however possibly complemented with an ad-hoc reviews if needed). Updates are triggered by the passage of time, by significant changes in available forecasts (either internal or external), or by a combination of these two. Infrequent updates in times of a rapidly changing environment might not be considered a good practice. The results suggest that banks have stepped up their pace during the COVID-19 pandemic: half of the sample has increased the frequency of updating FLI in the course of 2020, with a higher mass situated at those banks that review FLI on a less-frequent basis. As a result, all banks have updated their FLI at least semi-annually during 2020.

**Figure 69:** Severity of scenarios: IFRS 9 vs internal ST

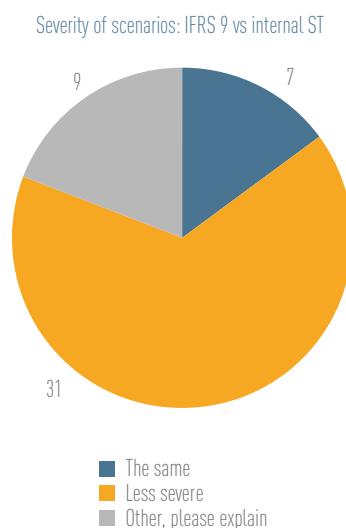
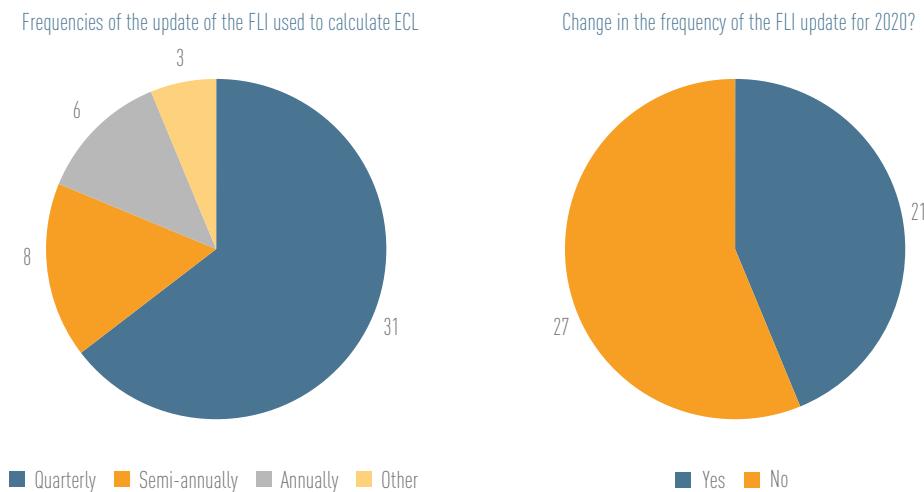


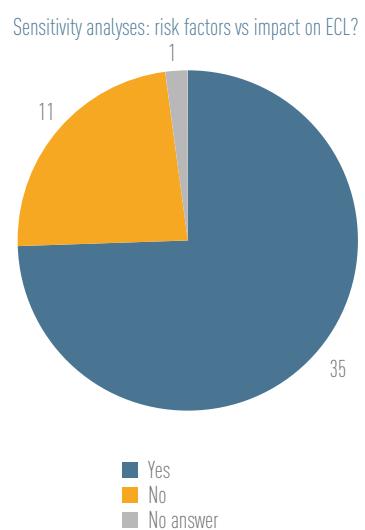
Figure 70: Update of FLI used to calculate ECL



## 5.4. Use of sensitivity analyses

133. In the context of the development of sensitivity analyses in relation to relevant risk factors (including macroeconomic variables and scenarios), 75% of the institutions have adopted the good practice of subjecting their ECL outcome to a sensitivity analysis towards at least one risk factor, with different types of sensitivity analyses applied in this regard. 43% of the institutions reported the ECL sensitivity reflecting variations in the macroeconomic variables (mainly, GDP, HPI and unemployment rates) while only 13% measure a difference between ECL level under each macroeconomic scenario (weighting).

Figure 71: Sensitivity analysis: risk factors vs impact on ECL



## 6. Classification and measurement

### KEY TAKEAWAYS



### KEY TAKEAWAYS OF THIS SECTION

When analysing the practices put in place by institutions as regards classification and measurement of financial instruments, there are some particular fields where the diversity of those practices may suggest that additional guidance would be needed when assessing whether certain levels of sales would still be consistent with a hold-to-collect (HTC) model. Some of these fields are:

- Assessment of 'insignificant in value'. The huge dispersion observed in the level of sales occurred reinforces the need for stronger internal policies to be put in place, following an adequate level of guidance and review.
- Assessment of 'frequency of sales'. On top of the lack of practices' harmonisation, it was also identified that a few institutions did not define any criterion to perform this assessment. This is a matter of concern.
- Sales that have occurred due to an increase in credit risk. The observed diversity in practices regarding the identification of sales that are still compatible with a HTC business model highlights the possible need for further investigations and, eventually, additional guidance on the existing accounting requirements on this matter. One question that would matter from a regulatory and supervisory perspective is whether the indicators being used and the implemented policies are robust enough to work well under any economic scenario (including stressed scenarios).

To note, for those institutions establishing thresholds in terms of frequency or volume of sales, the majority have declared that during the first semester of 2020 these thresholds were never triggered.

As expected, also in line with the strict requirements of IFRS 9, very few reclassifications between the different accounting categories were performed by institutions (only in 10% of the sample reporting occurred reclassifications). In some cases, it was not possible to understand which changes were made to the respective business model in order to take the decision on those reclassifications. Given this, it continues to be worth highlighting that, under IFRS 9, if there has been no change in the business model for managing the financial assets, a reclassification between the different accounting categories is not permitted.

It is also important to highlight that the classification of financial instruments in the most appropriate accounting category is of relevance from a regulatory and supervisory perspective. Only an accurate accounting classification will allow that a proper and consistent measurement basis is being applied from an accounting perspective (amortised cost vs fair value – OCI or PL) that, as a consequence, will be reflected in the prudential ratios. This assumes an increased importance in the absence of prudential filters (currently the case under the CRR II) that would neutralise some of the fair value variations from the regulatory figures. In order to ensure that a minimum level of harmonisation across institutions in the EU is achieved as regards the measurement basis of the financial assets, a robust accounting framework assumes great importance.

As regards the SPPI test, in overall terms, it seems to be working well and there are no specific concerns on what was observed from a regulatory/supervisory perspective.

## MORE INFO

**WHAT IS CLASSIFICATION AND MEASUREMENT UNDER IFRS 9?**

Financial assets held by an institution under a hold-to-collect (HTC) business model are managed to collect contractual cash flows over the life of the instrument. Although sales are not envisaged by this business model, the entity does not need to hold all of those financial instruments until maturity. Thus, an entity's business model can still be to hold financial assets to collect contractual cash flows even when some sales of financial assets occur or are expected to occur in the future. Under IFRS 9, the level of sales should not in themselves determine the business model and cannot be considered in isolation<sup>[109]</sup>. In detail, sales that i) are insignificant in value (even if frequent); or ii) are infrequent (even if significant in value); or iii) occur in the event of an increase in the credit risk of the instruments; or iv) are made close to the maturity of the financial assets and the proceeds from the sales approximate the collection of the remaining contractual cash flows, might be consistent with a hold to collect business model. While it is noted in IFRS 9 that the level of sales should not be used in isolation to determine business model it is explicitly stated that if more than an infrequent number of sales is made out of a portfolio and those sales are more than insignificant an entity needs to assess whether and how such sales are consistent with an objective of collective contractual cash flows<sup>[110]</sup>.

In addition to assessing business model, management should assess whether the contractual cash flows of the financial asset represent solely payments of principal and interest (SPPI). Contractual provisions may affect the cash flows of an

instrument such that they do not give rise to a straightforward repayment of principal and interest. An entity is required to carefully assess those features in order to conclude whether the instrument meets the SPPI test.

There are several features that are common to many financial assets and which would not usually prevent the contractual cash flows being solely payments of principal and interest<sup>[111]</sup>. Whereas, contractual features that introduce exposure to risks or volatility in the contractual cash flows unrelated to a basic lending arrangement, such as exposure to changes in equity or commodity prices, do not give rise to contractual cash flows that are SPPI<sup>[112]</sup>. For example, convertible bonds, profit participating loans and obviously derivatives will not meet the SPPI criterion. For these types of instruments, it is a matter of fact that they do not meet the SPPI criterion. As mentioned in the EBA December 2018 report, it seems that SPPI is having a limited impact in terms of mandatorily classifying financial instruments in the residual category (fair value through profit or loss).

Financial assets under a HTC business model that meet the SPPI test are measured at amortised cost. Under a hold-to-collect and sell business model, financial assets that meet the SPPI test are measured at fair value through other comprehensive income. Instruments not classified in any of these categories (via the business model assessment or the SPPI test) are measured at fair value through profit or loss.

<sup>[109]</sup> Please see IFRS 9, paragraph B4.1.2C.

<sup>[110]</sup> Please see IFRS 9, paragraph B4.1.3B.

<sup>[111]</sup> Please see IFRS 9, paragraph B4.1.13.

<sup>[112]</sup> Please see IFRS 9, paragraph B4.1.14.

## 6.1. Business model assessment

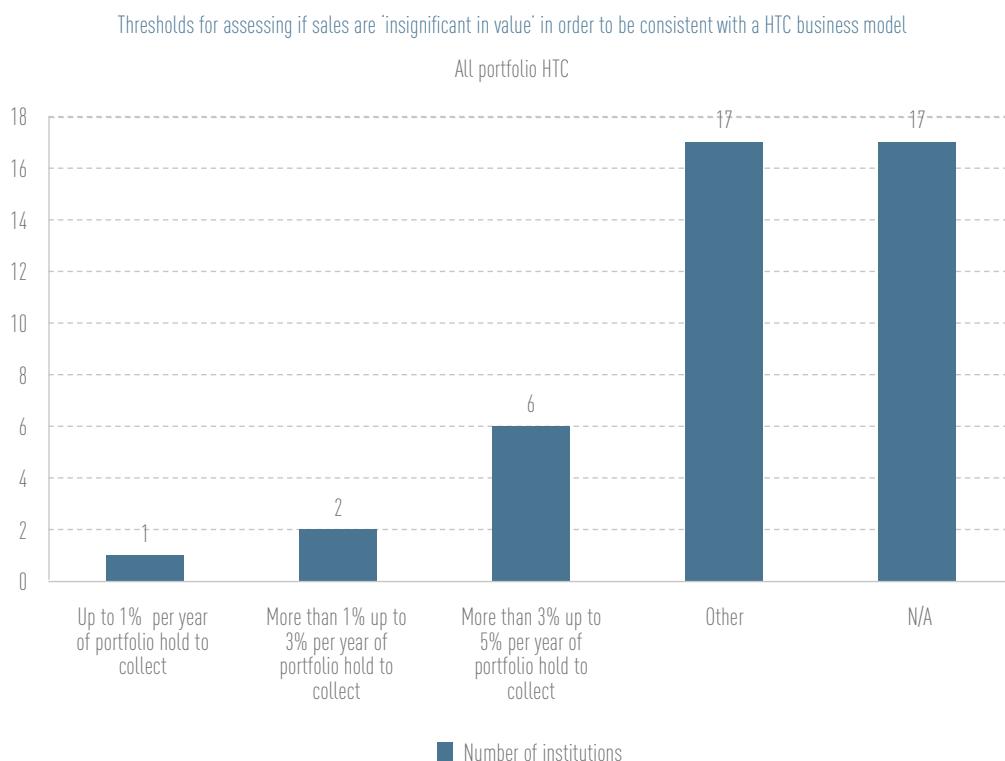
134. When assessing whether a sale is 'insignificant in value' to assess the business model, institutions in the sample report the use of many different thresholds and methodologies. The level of complexity

and sophistication of these methodologies can be quite distinct. As an example, when considering the thresholds for the category 'All portfolio HTC' (please see next Figure), 21% of the institutions answering this question have mentioned a threshold of sales lower or equal to 5%

per year of total portfolio HTC. The 40% of institutions mentioning 'Other' have typically applied more complex or multiple thresholds that could not be categorised in the other ranges presented in the chart. Finally, the 40% of institutions classified as 'N/A' did not report any thresholds for the entire category 'All portfolio HTC' but have, in some cases, determined these thresholds at product level type. While it would be difficult to conclude on how these approaches compare between

them and which ones could result in more conservative outcomes, especially taking into consideration that triggers are established at different level (total portfolio vs each product type), it is clear that no consistency or clear trends are observed in the type of assessment that institutions are running and, as such, this is an area where potential additional guidance could improve comparability, harmonisation and robustness of the processes / methodologies put in place.

Figure 72: Thresholds to assess 'insignificant in value' applied at the level of HTC portfolio [113]

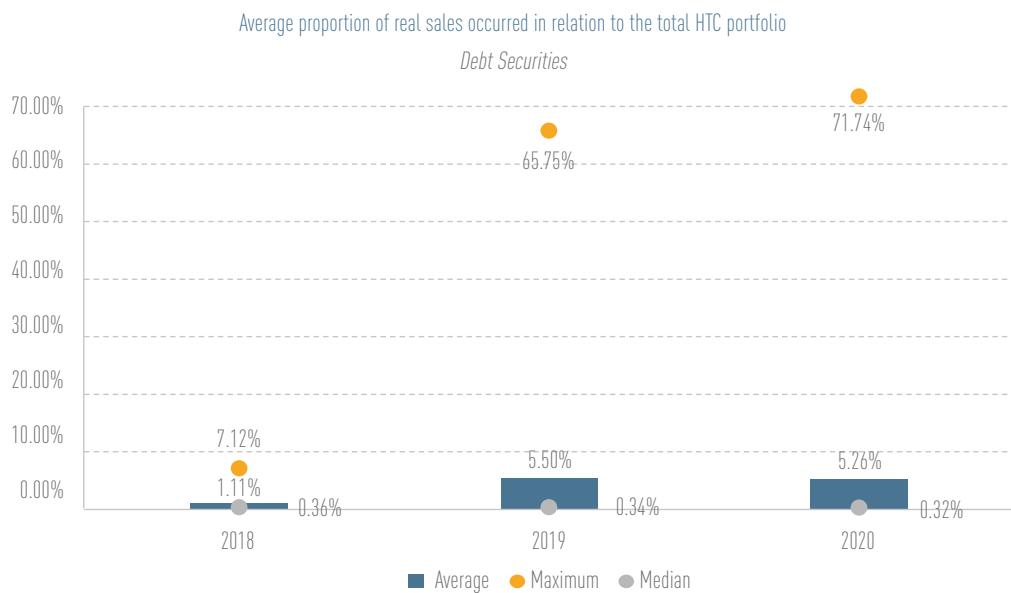


[113] 5 institutions were excluded from this analysis given that it was concluded that they do not define quantitative thresholds for this purpose (4 institutions stated that explicitly, while 1 did not provide any information in this regard).

135. When looking at the proportion of real sales occurred in relation to total HTC portfolio it is observed that, from 2018 to June 2020, the highest among the averages observed equals 5.5% of the total portfolio. The highest sales were reported on debt securities portfolios, while the lowest percentage of sales was reported

on the loans and advances portfolios. The huge dispersion observed (to note, in 2020 one institution in the sample reported around 72% of real sales in the debt securities portfolio) reinforces the need of close supervisory scrutiny and eventually the implementation of stronger internal policies.

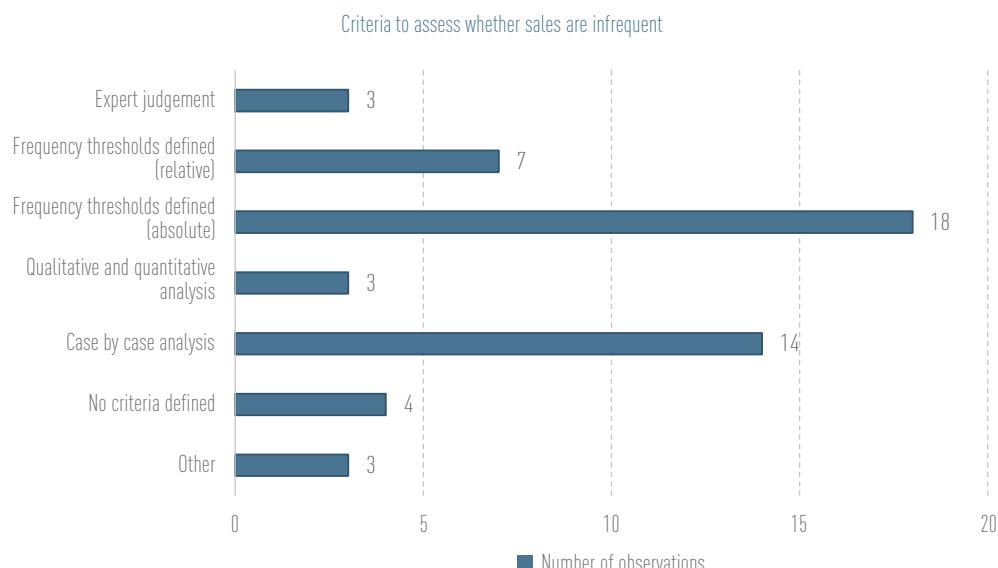
Figure 73: Real sales of debt securities: 2018 to June 2020



136. Regarding the assessment of the frequency of sales, the majority of institutions in the sample have defined absolute and/or relative threshold(s) for the frequency (please see next Figure). Not surprisingly, a multiplicity of practices is also observed which would result, with high probability, in a non-comparable outcome. Also in this case, additional guidance would be welcome. While this report does not intend to provide any views on the adequacy of the rules under the accounting framework and conditions under which the occurrence of sales would still be in line with an HTC business model, harmonisation on how it is applied would certainly be benefi-

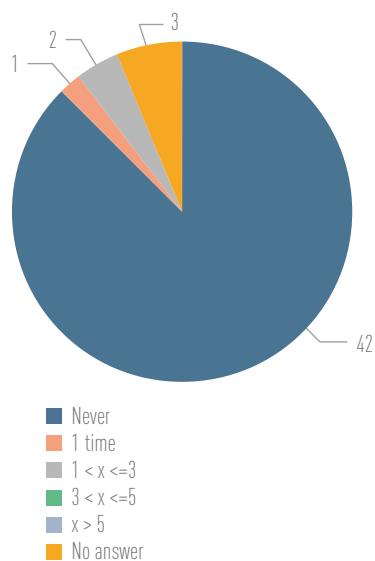
cial. A clear matter of concern is that a few institutions have clearly mentioned that no criterion is defined to assess frequency of sales. In overall terms, given the information provided by institutions as regards the criteria used to assess whether sales are infrequent, institutions are encouraged to review the processes in place and move towards a more robust approach. While it is acknowledged that the guidance on this matter leaves room for significant expert judgement, institutions should guarantee that clear internal policies are implemented in order to guarantee a consistent, regular and well-designed method to perform this assessment.

Figure 74: Assessment of 'sales frequency'



137. As regards the number of breaches of thresholds in terms of frequency or volume of sales, the majority of the institutions in the sample have declared that during the first semester of 2020 sales were below these thresholds (please see next Figure).

**Figure 75:** Number of breaches of threshold in terms of frequency or volume of sales

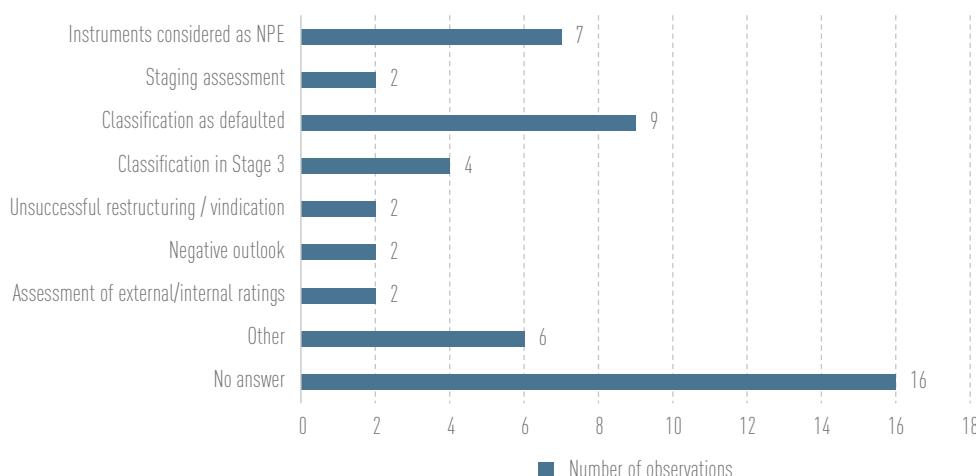


138. When analysing sales that have occurred due to an increase in credit risk but which are still consistent with an HTC business model, institutions in the sample have considered different types of indicators. As an example, a list of different indicators considered for a subset of credit-impaired financial assets has been presented in the next Figure. Diversity in practices regarding the identification of sales that are still compatible with a HTC business model highlights the need for further investigations and, eventually, additional guidance on the existing accounting requirements on this matter.

**Figure 76:** Identification of the increase in credit risk for sales which occurred due to an increase in credit risk during the reference period for a subset of credit-impaired assets

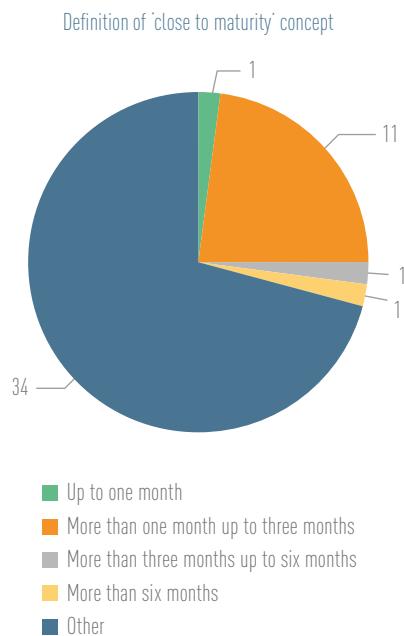
For sales occurred due to an increase in credit risk during the reference period, how was the increase in credit risk identified?

*Credit-impaired financial assets*



139. Regarding the definition of 'close to maturity', institutions in the sample have also mentioned different approaches, mainly based on i) the residual months to maturity; or ii) thresholds in a form of ratio of the remaining maturity to the total original maturity. Among the institutions which reported that 'Other' definition of 'close to maturity' concept has been applied (71% of the institutions in the sample), 76% of these institutions have developed a threshold for the concept of 'close to maturity' (either as a single criterion or as a combination with other conditions or thresholds).

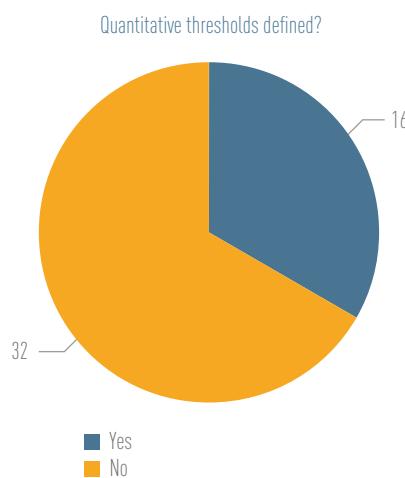
Figure 77: Definition and implementation of 'close to maturity'



140. With regard to the assessment whether the proceeds from the sales approximate the collection of the remaining contractual cash flows, as presented in the next graph, only one-third of the institutions in the sample reported that quantitative thresholds were defined for this purpose, mainly to compare sales proceeds to the total outstanding contractual cash flows at the time of sale.

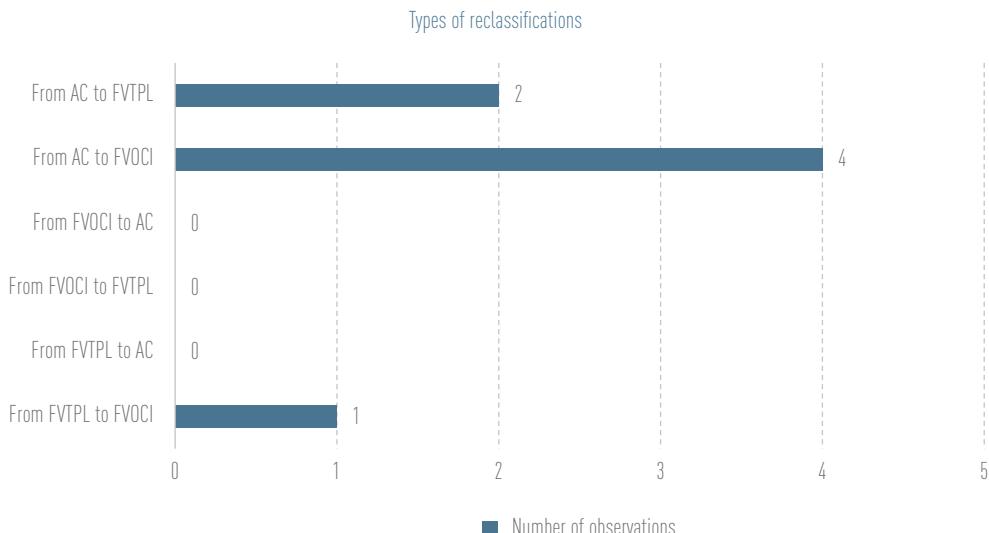
141. Among the majority of institutions which did not develop any specific quantitative threshold, some perform a case by case assessment while others reported comparing sales proceeds to the total outstanding contractual cash flows at the time of sale or apply other various approaches.

Figure 78: 'Close to maturity' concept – assessment of whether the proceeds from sales approximate the collection of the remaining contractual cash flows



142. On the number of reclassifications between accounting categories of financial assets since the first application of IFRS 9, very few reclassifications were observed, which was expected given that reclassifications under IFRS 9 are supposed to occur under very specific, limited and well-justified circumstances (please see next Figure). For 3 out of the 5 institutions reclassifying financial assets, it was possible to confirm or to obtain sufficient information to conclude that these reclassifications occurred due to a change in the business model. For the remaining 2 institutions, while it would be expected that the same rationale was followed (given the requirements under IFRS 9), not enough information was made available on the rationale followed and changes considered in the respective business model. In this context, it should be recalled that under IFRS 9 reclassifications are expected to be very infrequent. If there has been no change in the business model for managing the financial assets, then reclassification between the different accounting categories is not permitted. [114]

[114] Please see IFRS 9, paragraph 4.4.1.

Figure 79: Type and number of reclassifications since the first application of IFRS 9<sup>(115)</sup>

<sup>(115)</sup> Information in the graph is presented for 5 institutions which in total reported 7 reclassifications.

143. As regards the impact produced by these reclassifications, on the percentages of initial and receiving categories the results were diverse. For the reclassification from the fair value through P&L (FVTPL) category to fair value through other comprehensive income (FVOCI), it was reported that these instruments represented 26% of initial category and 3% of the receiving category. For the remaining reported changes, lower levels were reported for the initial category and higher levels for the receiving category: (i) from amortised cost (AC) category to FVOCI category (on average, 0.7% of the initial and 6% of the receiving category) and; (ii) from AC to FVTPL (on average, almost 2% of the initial and almost 62% of the receiving category). The CET1 impact from these reclassifications was not material.

## 6.2. Solely payment of principal and interest (SPPI) test

144. In this regard, approximately half of the institutions in the sample pointed out that certain types of debt securities and loans with particular characteristics<sup>(116)</sup> in 10% of the cases, on average, have not met the SPPI test. Additionally, on average, units in investment funds correspond to the type of instru-

ments that is more often reported as not meeting the SPPI test. The same type of observation would be expected, for instance, to contractually linked instruments and non-recourse financial assets. However, the % of SPPI test not met for these instruments reported under this exercise was very low. As it is a given that these instruments would not meet such a test in the majority of the cases, the test itself is most probably not even run and for that reason also not reported as 'not met'. Independently of the results obtained under this particular exercise, some attention should be given to this matter as well.

145. In some cases, the time value of money element may be modified and so 'imperfect'<sup>(117)</sup>. In such cases, an entity must assess the modification to determine whether the contractual cash flows represent solely payments of principal and interest on the principal outstanding. In same circumstances, the entity may be able to make that determination by performing a qualitative assessment whereas, in other circumstances, it may be necessary to perform a quantitative analysis. At this regard, approximately 1/5 of institutions declare that, on average, 9% in 2018 and 11% in 2020 of financial instruments with a modified time value of money have not met the SPPI test.

<sup>(116)</sup> For example, structured payments/embedded options; deferred interest payments that do not accrue additional interest; grace period; unreasonable prepayment penalty.

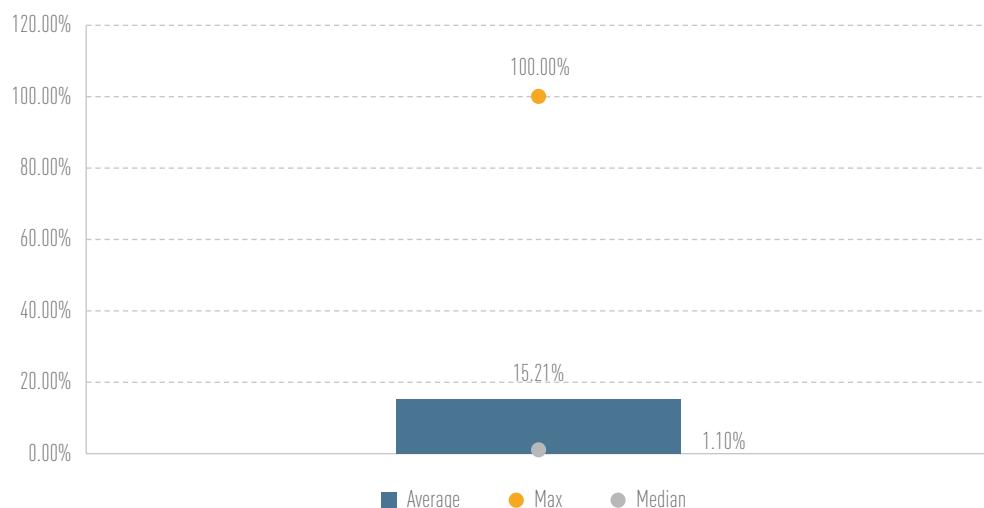
<sup>(117)</sup> Please see IFRS 9, paragraph B4.1.9B.

146. Regarding the quantitative assessment, only half of the institutions provided information [118]. Based on those answers, the majority of the institutions perform

[118] Remaining institutions were excluded from the analysis due to lack of quantitative answers provided or 'zero' reported.

quantitative assessment while 9% of the institutions declare that only qualitative assessment is performed. Furthermore, the institutions pointed out that, on average, 15% of financial instruments with a modified time value of money require a quantitative assessment.

**Figure 80: Proportion of financial assets which require quantitative benchmark analysis [119]**

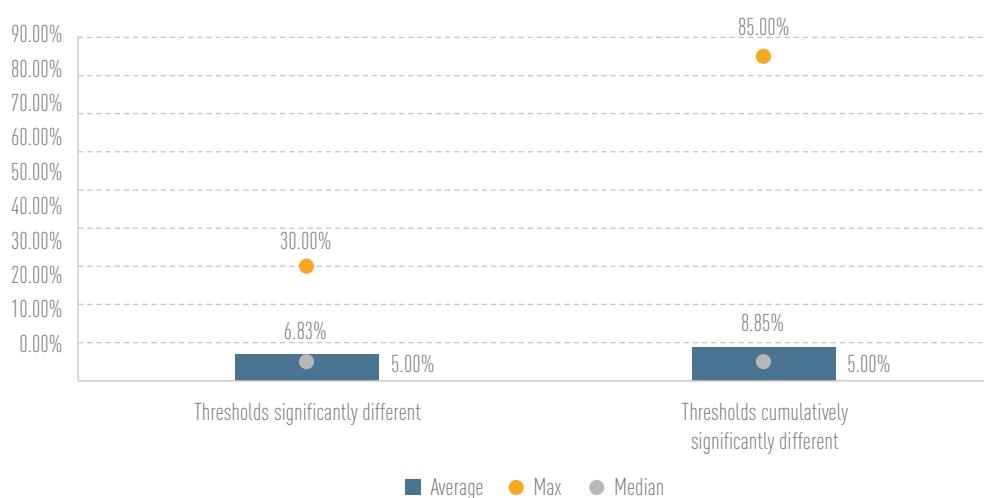


[119] To be noted: there are 2 institutions within the sample which reported a proportion of 100% of instruments requiring quantitative benchmark analysis. When excluding these two observations from the calculations, the following results are obtained: average of 7.14%, maximum of 69.00% and median of 0.98%.

147. As regards the definition of thresholds to assess whether the cash flows are significantly different from the benchmark cash flows in each reporting period and cumulatively, institutions have also men-

tioned different levels of thresholds and number of periods considered. On average, the level of these thresholds is under 7% for each reporting period and under 9% cumulatively (please see next Figure).

**Figure 81: Thresholds for assessing if the cash flows significantly different from the benchmark cash-flows in each reporting period and cumulatively**



# 7. Recognition and derecognition

## KEY TAKEAWAYS



### KEY TAKEAWAYS OF THIS SECTION

As regards the derecognised of financial assets after a modification of its contractual conditions, multiplicity of both qualitative and quantitative approaches has been observed across the sample. Around 75% of institutions apply qualitative criteria for this purpose while approximately half of the institutions use the 10% criterion (similarly to what is done for financial liabilities) complemented with other qualitative and/or quantitative assessment. It is worth noting that only for 12.5% of the institutions in the sample, contractual modifications that cause the breach of the SPPI criterion are automatically considered a substantial modification leading to the derecognition of the original asset. In addition, most of the institutions in the sample applied these criteria independently of the impairment stage of the financial asset. It is also important to highlight that the application of these criteria remained stable since their implementation as it was indicated that only very few changes were made to the derecognition policies during 1H 2020.

In the context of the write-offs policy, as regards the internal and external factors considered for assessing whether there is no reasonable expectation of recovery and that therefore a total write-off is appropriate, the most frequently used criteria are those related to the likelihood of realising the related collateral, ceasing to enforce the debt and debtor under liquidation proceedings. However, the majority of the institutions complement them by applying an expert judgment. Regarding the percentage of recoveries after tak-

ing the decision to derecognise the asset, two-thirds of the institutions reported recovery percentages below 10% while a few institutions have reported that more than 30% of the amounts written-off were recovered. However, a proportion of recoveries that goes beyond 10% can indicate that implemented policies by institutions still need some review/refinement. This is also an area where potential additional guidance could help improving the policies followed by institutions.

Regarding the presentation of regular interest income for Stage 3 instruments, it was observed that more than a half of the sample register it in line with the conclusions of the ITG December 2015 corresponding to the 'Approach A' presented in the agenda paper 9. As regards the penalty interest income recognition, the large majority of the sample have reflected them in profit or loss when the amount of interest is paid. Some other institutions, on the contrary, record the income from penalty interest prior to their collection, increasing the carrying amount of the Stage 3 exposure. In the context of the policies on recognition and presentation of the accrued interest related to non-performing debt instruments measured at fair value through profit or loss, a significant diversity in the implemented practices is also observed. Overall, heterogeneity on the recognition and presentation practices around interest income is confirmed and, given this, it should be duly considered by supervisors when performing related activities and reviews.

## 7.1. Derecognition assessment

MORE INFO



### WHAT IS THE DERECOGNITION OF A FINANCIAL ASSET?

A financial asset is de-recognised when the contractual rights to the asset's cash flows expire or when the asset is transferred (and this transfer qualifies for re-recognition based on a risk and rewards and controls test).

Assessing whether a modification of a financial asset leads to its derecognition can be quite a complex exercise as modifications can be originated by many different circumstances (change in the credit risk, commercial reasons, etc.). If there is a modification of a financial liability that results in substantially different terms the original financial liability is derecognised and a new financial liability recognised: when comparing the old and new terms of

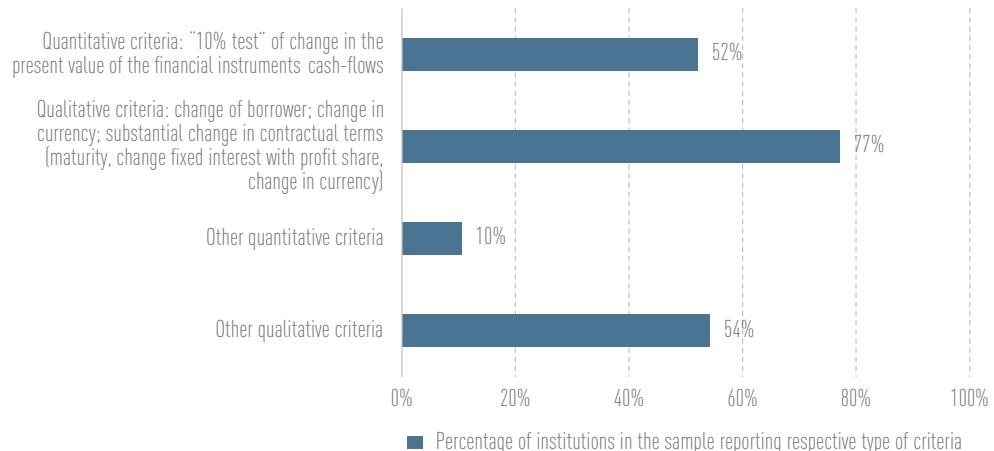
the financial liability, if the present value of the cash flows under the new terms are at the minimum 10% different from the discounted cash flows of the old terms, then the terms are considered 'substantially different'. While this 10% test is many times used for financial assets, it should be kept in mind that decisions on derecognition should not be based only on its result as a broader scope of information would need to be considered to perform this assessment as per IFRS 9 requirements.

Under IFRS 9 there is no concrete definition of what "transferring substantially all the risks and rewards" means and the application of this requirement involves a high degree of judgement.

148. Regarding the criteria that lead to the derecognition of a financial asset after a modification of its contractual conditions, multiplicity of both qualitative and quantitative approach can be observed across the sample. Around 75% of institutions apply listed qualitative criteria for this purpose (e.g. change of borrower, change in currency, sub-

stantial change in contractual terms such as maturity, change fixed interest with profit share, change in currency). Approximately half of the institutions in the sample use the 10% criterion <sup>(120)</sup> (similarly to what is done for liabilities). Practically all of them complement this analysis with other qualitative and/or quantitative assessment.

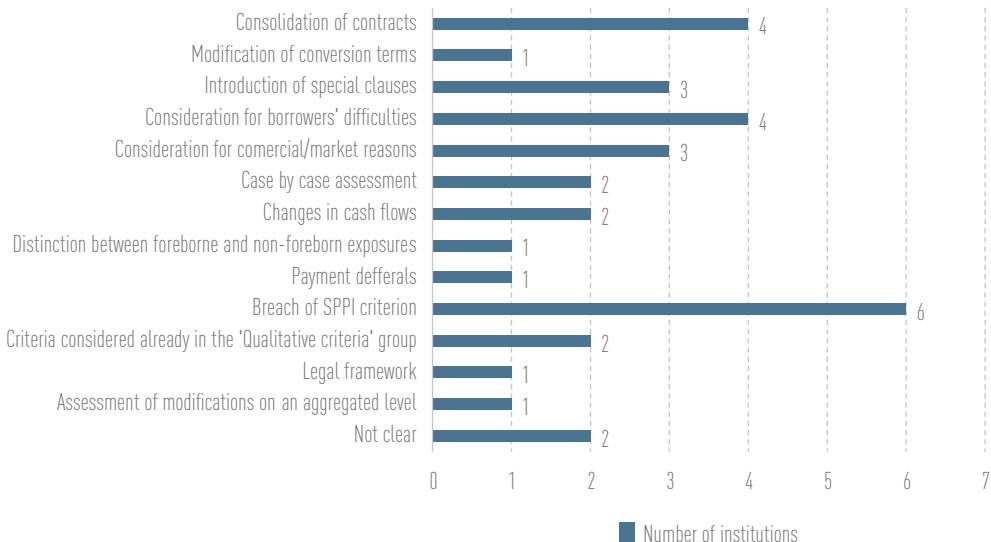
**Figure 82:** Criteria used to assess whether or not the modification of financial assets leads to the derecognition of original exposure



<sup>(120)</sup> Please see IFRS 9, paragraph B3.3.6.

149. Besides the '10% test' mentioned in the previous paragraph, some other quantitative criteria are also considered by around 10% of the institutions in the sample and they are mostly linked to changes in the due date or in the loan amount.
150. In relation to the qualitative criteria other than listed in the previous chart, the most frequently used by institutions are: ceasing to meet the SPPI criterion, consideration for borrowers' difficulties and other changes in contractual terms. Please also see the next Figure with a comprehensive list of other approaches applied.

Figure 83: Types of other qualitative modifications



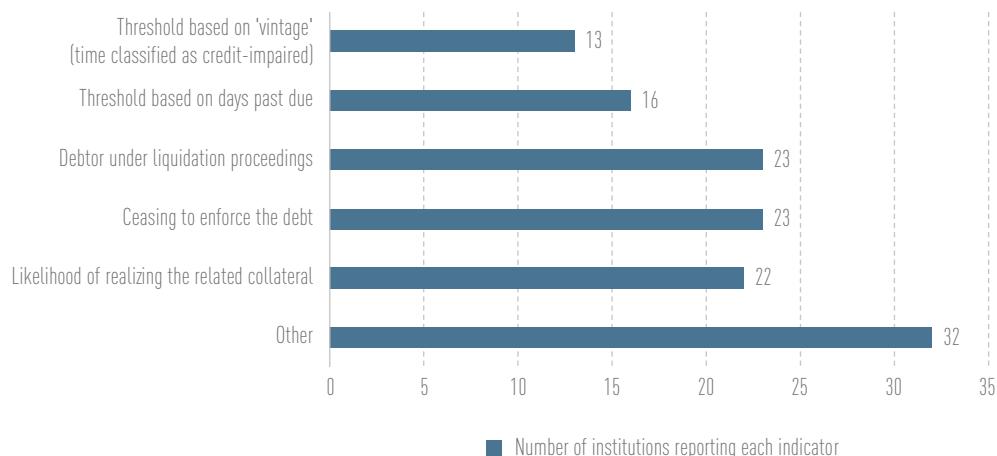
151. It is worth mentioning that only for 12.5% of the institutions in the sample, contractual modifications that result in the SPPI criterion not being met (e.g. addition or deletion of equity conversion term) are automatically considered a substantial modification that lead to the derecognition of the original asset.
152. These criteria are, for most of the institutions in the sample, applied independently of the impairment stage of the financial asset. Thirty-three percent of the institutions have adjusted some evaluation criteria (i.e. different considerations for the contractual cash flows) depending on the stage.
153. The criteria used as regards the derecognition assessment have remained stable since they were implemented by the institutions. Only around 6% institutions in the sample have incorporated modifications during the 1H 2020 when comparing to the previous reference periods.

## 7.2. Write-offs policy

154. Regarding the internal and external factors considered for assessing whether there is no reasonable expectation of recovery and that therefore a total write-off is appropriate, the most frequently used criteria are those related to the likelihood of realising the related collateral, ceasing to enforce the debt (e.g. further litigation actions to collect a claim are considered economically unprofitable, no legal basis for further handling of the cases) and the debtor being under liquidation proceedings (please see next Figure). However, most of the entities complement them by carrying out an expert judgment on each operation.

Figure 84: Total write-offs

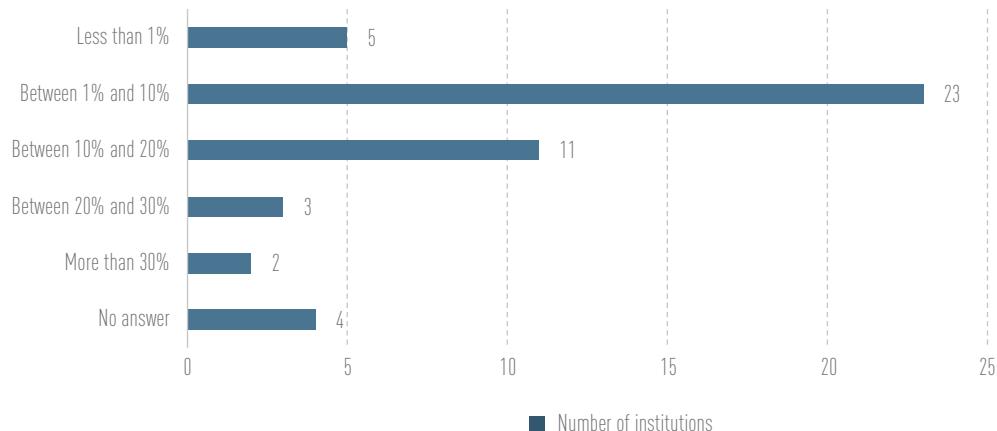
Internal and external factors considered for assessing whether there is no reasonable expectation of recovery



155. In the case of partial write-offs, there is some heterogeneity in factors considered to carry them out. Twenty-five percent of the institutions base their assessment on forbearance measures. A greater number of institutions (almost 40% of the sample) justify partial write-offs with the possible execution of the collateral, although the case-by-case analysis is the most frequent.
156. A potential good measure to assess the efficacy of the implemented write-off policies is the percentage of recoveries after taking the decision to derecognise the asset. Two-thirds of the institutions that have answered this question reported recovery percentages below 10%, with a few institutions reporting that more than 30% of the amounts writ-

ten-off were recovered. A proportion of recoveries that goes beyond 10% can indicate that implemented policies still need some review/refinement. Indeed, if high percentages of recoveries after write-offs are observed on a continuous basis, this could mean that policies need to be improved in order to have a better alignment between what is written-off and what should have been written-off. Low quality practices on this matter have a direct impact on key supervisory metrics monitored on an ongoing basis and is a reason why the potential need for improvement of write-offs policies should be a point of attention also for regulators and supervisors. In this regard, some additional guidance on this topic would also be beneficial.

Figure 85: Proportion of recoveries after write-offs



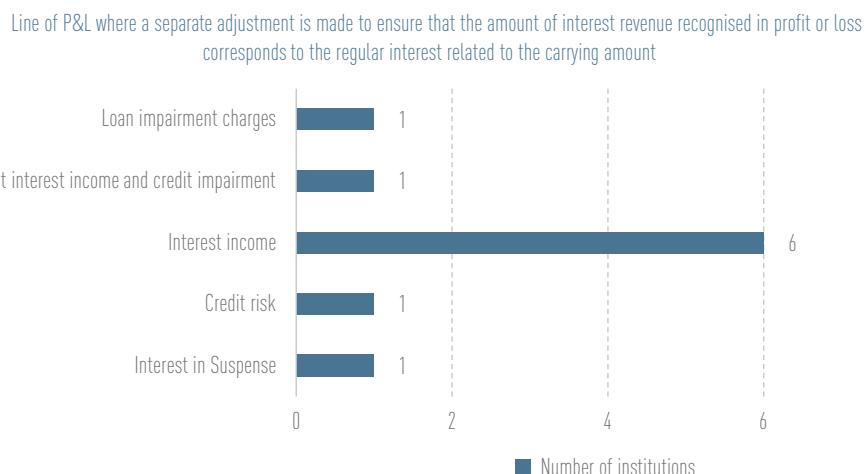
### 7.3. Presentation of interest income

157. Regarding the presentation of regular interest income for Stage 3 instruments, more than a half of the institutions in the sample register it in line with the conclusions of the ITG December 2015 [121] corresponding to the 'Approach A' presented in the agenda paper 9 [122]: *the whole amount of regular interest is included in the gross carrying amount (i.e. amount before adjustments due to credit risk) of financial assets. The amount of regular interest calculated on the basis of the carrying amount (non-impaired portion of financial assets) is presented as interest income in the statement of profit or loss.* Following the example presented in this agenda paper, under this approach,

the loss allowances increase while the coverage ratio remains the same.

158. Twenty-one percent of the institutions are registering regular interest income as follows: *the whole amount of regular interest is included in the gross carrying amount of financial assets (as in option 1). The amount of regular interest calculated on the basis of the gross carrying amount is presented as interest income in the statement of profit or loss. A separate adjustment is made in order to ensure that the amount of interest revenue recognised in profit or loss corresponds to the regular interest related to the carrying amount (non-impaired portion of financial assets).* The following figure shows the line of the P&L account with which this amount is corrected, the most frequent being against the 'interest income' itself.

Figure 86: P&L line where a correction is considered



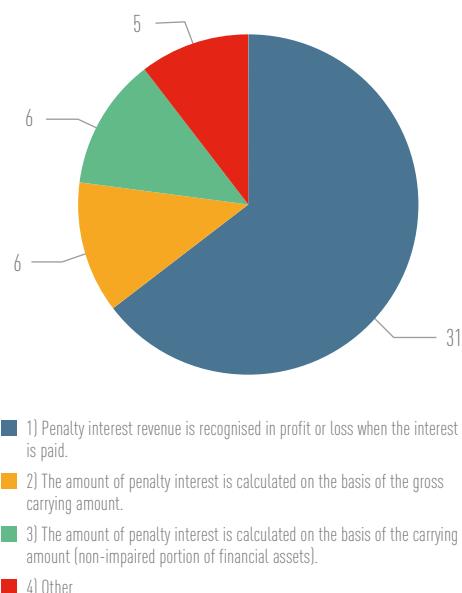
159. Finally, excluding one entity that has not responded to the questionnaire, the rest of the entities answered that they recorded it in another way.
160. In relation to penalty interest income recognition, the large majority of the institutions in the sample have reflected them in profit or loss when the amount of interest is paid (please see next Figure). For this reason, penalty interests do not appear on the statement of financial

position and are included in notes to the financial statements only when the amount is material. Some entities, on the contrary, record the income from penalty interest prior to their collection, increasing the carrying amount of the Stage 3 exposure. The amount of penalty interest that appears in the statement of financial position depends on the basis of calculation (please see description in the next Figure).

[121] Transition Resource Group for Impairment of Financial Instruments ('ITG') Meeting Summary – 11 December 2015: [link](#)

[122] Agenda Paper 9 of the ITG December 2015 envisages three approaches (Approach A, B and C) which meet results in a different combination of gross carrying amount and loss allowance. In all these three approaches, the overall impact on P&L (considering both interests and loss allowances) and the amount of the amortised cost is the same. Agenda Paper 9: [link](#)

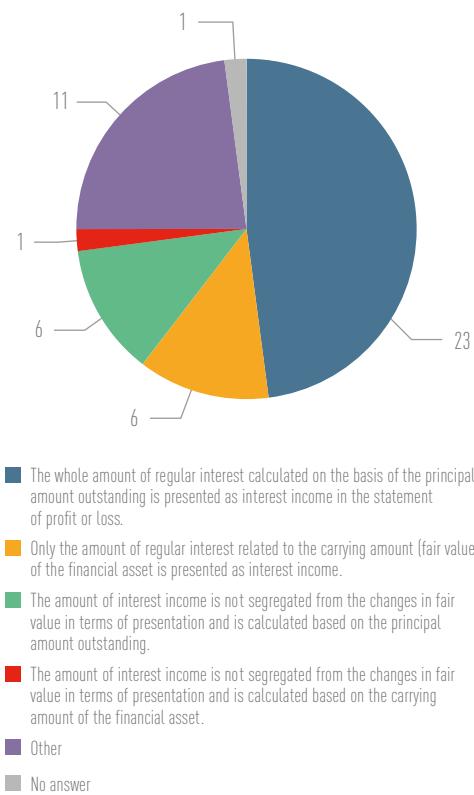
**Figure 87: Policy on recognition of penalty interest related to Stage 3 exposures in the statement of profit or loss**



161. In the previous Figure, the answer 'Other' comprises a variety of accounting treatments (including the non-recognition of penalty interest or the immediate neutralisation against impairment recognition).

162. Regarding the policies on recognition and presentation of the accrued interest related to non-performing debt instruments measured at fair value through profit or loss, a significant heterogeneity in the implemented practices is also observed. This heterogeneity is mainly related to the following aspects: if the interest amount is segregated or not from the changes in fair value in terms of presentation and if this amount is calculated on the basis of the principal amount outstanding or only on the basis of the carrying amount (fair value). Around half of the institutions in the sample have indicated that the whole amount of regular interest is calculated on the basis of the principal amount outstanding and register them as interest income in the statement of profit or loss. Please see next Figure for the complete overview:

**Figure 88: Policy on recognition and presentation of the accrued interest related to non-performing debt instruments measured at fair value through profit or loss**



163. Similar to what was mentioned in previous sections of this report, the intention of the analysis performed is not to conclude on whether practices followed by institutions are adequate or not in light of the accounting standards requirements. The main purpose of the assessment conducted is to provide detailed insights on the practices followed by institutions serving as a tool for the multiplicity of supervisory/regulatory activities that are based on the accounting figures. Heterogeneity on the recognition and presentation practices around interest income is confirmed and, given this, it should be duly considered by supervisors when performing such activities and reviews.

# 8. Application of IFRS 9 Transitional Arrangements and other prudential observations

## KEY TAKEAWAYS



### KEY TAKEAWAYS OF THIS SECTION

#### **IFRS 9 transitional arrangements**

IFRS 9 transitional arrangements have been extended via the CRR quick fix in 2020, extending the original ending of the transition from December 2022 to December 2024. In addition, banks were authorised to change the initial approach chosen (in particular from an initial decision not to benefit from the transitional arrangements to a decision to benefit from them).

As of December 2019, more than two-thirds of the institutions did not apply the transitional arrangements, while, as of December 2020, a bit less than two-thirds of the institutions were not using them, meaning that all in all, only a few institutions decided to take the benefit of the changes from the CRR. In overall terms, the majority of EU institutions (94%) decided not to change their approach between December 2019 and December 2020. In addition, in overall terms, independently of the type of approach applied, the simple average impact in terms of CET1 capital was equal to 119 bps for the EU banking sector as of December 2020. This level remains broadly stable in comparison with impacts observed before the amendments introduced by the CRR II 'quick fix'.

The EBA intends to continue monitoring the use of transitional provisions. The amended CRR provisions state that the competent authority 'should ensure that such reversals are not motivated by considerations of regulatory arbitrage'. In this context, competent authorities would take into account the facts and circumstances in each individual reversal case (and the level of documentation provided to justify the request for approval) when deciding whether a regulatory arbitrage issue might arise. The EBA intends to monitor at EU level these possible reversal cases in order to ensure consistency of approaches taken by competent authorities and a common understanding of the notion of regulatory arbitrage.

#### **Immovable property collateral valuation**

EBA Guidelines specify, for non-performing exposures, that the valuation of immovable property collateral should be updated at least annually. This would be seen as a good practice also from an accounting perspective. Although most banks perform an annual revaluation of immovable property collateral for their credit-impaired exposures, the results of the questionnaire suggest that not all banks have taken this good practice on board.

## 8.1. Application of IFRS 9 transitional arrangements

MORE INFO



### WHAT ARE IFRS 9 TRANSITIONAL ARRANGEMENTS?

IFRS 9 transitional arrangements were initially introduced in 2017 to mitigate impacts on institutions' own funds coming from the first-time application of the standard. These provisions were intended to be of a temporary nature and they were supposed to gradually expire by December 2022. However, in light of the outbreak of the COVID-19 pandemic, the IFRS 9 transitional arrangements were amended and further extended. In order to address the impacts of the recent crisis, the Basel Committee agreed in April 2020 to allow more flexibility in the transitional arrangements that phase-in in regulatory terms the impact arising from the implementation of expected credit losses accounting frameworks. Following this decision and in order to limit unintended effects in the regulatory capital resulting from a potential significant increase in the expected credit losses under the current COVID-19 scenario, amendments to the IFRS 9 transitional arrangements were also considered in the EU Law.

In this sense, Article 473a of the CRR 2 was amended by Regulation (EU) 2020/873 [123] (under the 'CRR 2 quick fix'). With this amendment, the IFRS 9 transitional arrangements were extended by 2 years, and institutions were allowed to fully add back

[123] [Link](#)

to CET1 any increase in expected credit losses recognised in 2020 and 2021 for financial assets that are not credit-impaired (i.e., expected credit losses recognised for Stage 3 exposures are not covered by this new regime). As regards the amounts being previously added back to CET1, no changes were made in terms of schedule or add-back percentage to be considered in each year. This mechanism guarantees that expected credit losses already reflected in CET1 as of December 2019 will not be neutralised under the new regime of IFRS 9 transitional arrangements (unless there is a change in the respective approach applied by a certain institution) [124].

Amongst other changes to Article 473a, paragraph 9 is now establishing that 'Competent authorities shall notify the EBA at least on an annual basis of the application of this Article by institutions under their supervision.' Institutions should be able to reverse the initial decision at any time during the new transitional period, subject to receiving the prior permission of their competent authority.

[124] Pursuant to the IFRS 9 transitional arrangements provisions, institutions are allowed to change their initial approach on whether to apply (and if so, in which form) or not these provisions. In this light, institutions which were not using the IFRS 9 transitional arrangements before the CRR II 'quick fix' amendments could start applying them.

164. The information presented in this section as regards the application of IFRS 9 transitional arrangements intends to complete and update the observations already included in the EBA IFRS 9 report published in December 2018 [125].

[125] [Link](#)

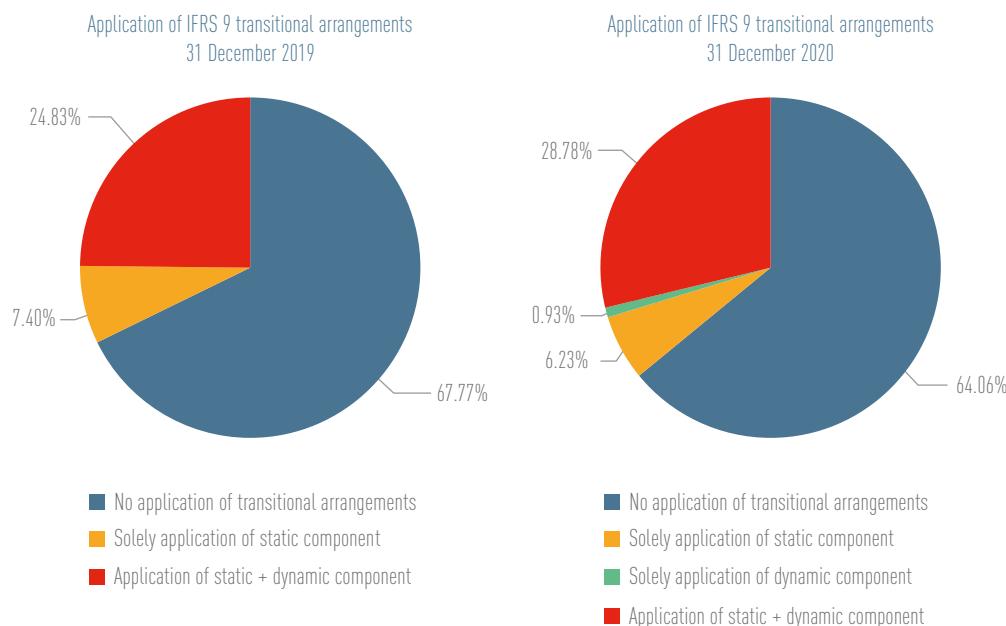
165. On the basis of information received at the highest EU level of consolidation [126], as of December 2020, around

[126] The analysis presented in this section has been performed on the basis of the information made available at the date of the report's finalisation. To note, the submission of these notifications by competent authorities is considered an ongoing exercise and regular monitoring will continue to be performed by the EBA on this matter. It is also important to note that this information is collected solely for institutions in scope of Article 473a of the CRR, i.e. institutions applying IFRS 9 (even if for regulatory purposes only) or the same type of ECL model, and not for the entire banking system.

64% of the institutions [127] did not apply IFRS 9 transitional arrangements. Among the institutions which decided to benefit from the add-back to the CET1 capital of the respective increase of expected credit losses, the vast majority applies both static and dynamic component [128] followed by the application of only static [129] or only dynamic [130]

components, this latter being insignificant. When comparing this information with December 2019 (pre CRR II quick fix), in relative terms more institutions are making use of transitional arrangements as of December 2020, but the use of the new provisions from the CRR quick fix remains limited.

**Figure 89: Application of the IFRS 9 transitional arrangements as of December 2019 and 2020 (EU level)**



165. Based on the information collected through the EBA supervisory data for the EU sample, the highest impacts in terms of CET1 are observed for the institutions which applied both static and dynamic components (128 bps on simple average) while they are slightly lower for institutions only applying a static approach (92 bps on simple average). On the contrary, institutions which selected the application of only dynamic approach reported less material impacts

in terms of CET1 (25 bps on simple average). In overall terms, independently of the type of approach applied, the simple average impact stemming from the application of IFRS 9 transitional arrangements was equal to 119 bps for the EU banking sector as of December 2020. This level remains broadly stable in comparison with impacts observed before the amendments introduced by the CRR II 'quick fix' [129].

[127] 483 institutions out of 754 institutions to which notifications were submitted to the EBA by the respective competent authorities with reference date December 2020.

[128] Paragraphs 2 and 4 of Article 473a CRR2.

[129] Solely application of paragraph 2 of Article 473a CRR2.

[130] Solely application of paragraph 4 of Article 473a CRR2.

[131] As of June 2018, the CET1 impact for the sample of banks considered in the exercise was, on simple average, 118 bps (please see paragraph 58 of EBA IFRS 9 report published in December 2018).

**Figure 90: CET1 impact of the application of IFRS 9 transitional arrangements per type of approach (EU sample) presented in basis points<sup>132</sup>**

Type of approach	Number of institutions	"CET1 Impact December 2020"	
		Average	Median
Solely application of paragraph 2 of Article 473a CRR2 (static component)	47	92	61
Solely application of paragraph 4 of Article 473a CRR2 (dynamic component)	7	25	24
Application of paragraphs 2 and 4 of Article 473a CRR2 (static + dynamic component)	216	128	83

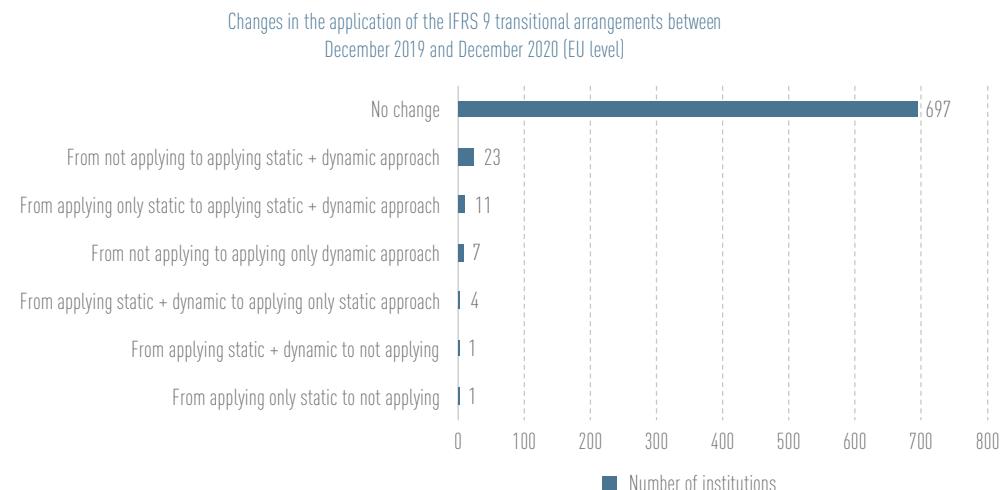
<sup>[132]</sup> To note, one of the institutions in the sample was removed from this analysis due to data quality issues

166. In relation to the changes in the approach for applying the IFRS 9 transitional arrangements, the majority of EU institutions (94%) decided not to change their approach between December 2019 and December 2020<sup>[133]</sup>. Among the in-

stitutions that started applying IFRS 9 transitional arrangements, the majority decided to apply both static and dynamic approaches. The next Figure summarises all the changes observed between these two reference dates.

<sup>[133]</sup> No change between December 2019 and December 2020 captures both instances: (i) institutions which did not change the type of approach applied; (ii) institutions which did not change their application (start/discontinue applying).

**Figure 91: Changes in the application of IFRS 9 transitional arrangements (EU level)<sup>[134]</sup>**



<sup>[134]</sup> Graph solely presents institutions which existed on both of the reference dates and which reported approaches for both of these dates

167. In the next Figure, the approaches applied by EU institutions per country are presented in terms of percentage of institutions<sup>[135]</sup>. In line with the Figures previously presented, for the majority of the countries more than half of insti-

tutions are not applying transitional arrangements. In addition, for 12 countries it has been observed that institutions in these jurisdictions have retained their previous approach. The evolution of the application of transitional arrangements will continue to be monitored by the EBA.

<sup>[135]</sup> Considering the completed notifications submitted to the EBA by competent authorities as per Article 473a of the CRR II.

Figure 92: Table per country with the approach selected by institutions as of December 2020 (EU level) and percentage of institutions changing their approach during 2020

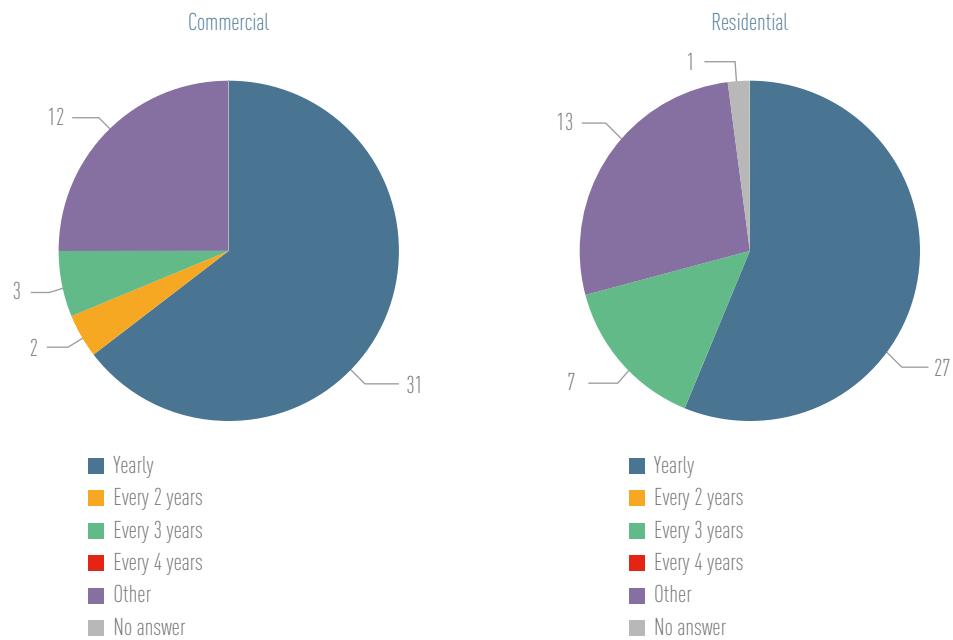
Approach applied December 2020 (% institutions EU level)					% of institutions changing approach in 2020
	No transitional arrangements	Static + Dynamic	Static only	Dynamic only	
Austria	63%	25%	0%	13%	31%
Belgium	62%	31%	0%	8%	31%
Bulgaria	42%	17%	42%	0%	0%
Croatia	60%	13%	27%	0%	0%
Cyprus	33%	67%	0%	0%	0%
Czech Republic	No notifications	No notifications	No notifications	No notifications	No notifications
Denmark	76%	16%	7%	0%	1%
Estonia	78%	11%	11%	0%	0%
Finland	91%	9%	0%	0%	0%
France	70%	30%	0%	0%	30%
Germany	75%	20%	0%	5%	25%
Greece	13%	80%	7%	0%	0%
Hungary	78%	22%	0%	0%	0%
Ireland	69%	31%	0%	0%	13%
Italy	38%	52%	10%	0%	2%
Latvia	54%	38%	8%	0%	0%
Lithuania	100%	0%	0%	0%	0%
Luxembourg	96%	4%	0%	0%	2%
Malta	63%	26%	5%	5%	21%
Netherlands	60%	20%	0%	20%	40%
Poland	17%	58%	25%	0%	42%
Portugal	65%	27%	8%	0%	3%
Romania	0%	92%	8%	0%	0%
Slovakia	75%	25%	0%	0%	0%
Slovenia	89%	0%	0%	11%	11%
Spain	73%	23%	4%	0%	12%
Sweden	89%	9%	2%	0%	0%

## 8.2. Immovable property collateral valuation

168. EBA Guidelines on management of non-performing and forbearance exposures (EBA/GL/2018/06) specify in its paragraph 198 that, for non-performing exposures, the valuation of immovable property collateral should be updated at

least annually. This would be seen as a good practice also from an accounting perspective. Although most banks perform an annual revaluation of immovable property collateral for their credit-impaired exposures, the results of the questionnaire suggest that not all banks have taken this good practice on board (please see next Figure).

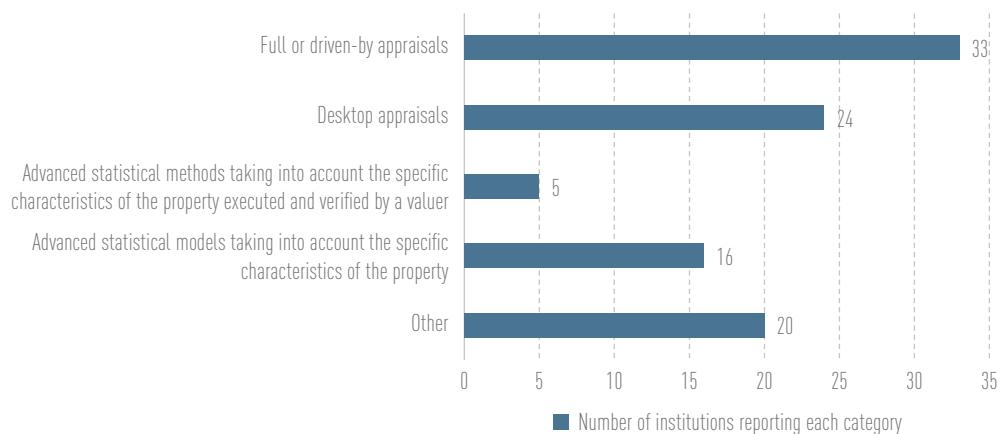
Figure 93: Frequencies of revaluation of immovable property collateral for credit-impaired exposures



169. As shown in the next Figure (non-mutually exclusive answer), most institutions rely on full revaluations or driven-by appraisals, followed by desktop appraisals. The remaining institutions do not rely on different methodologies than those given by the questionnaire, though they clarified that their approach

is dependent on the type of collateral (e.g. CRE or RRE) and the value of the exposure (more thorough revaluation for higher exposures). This points towards some differences as regards the methodologies for the revaluation of immovable property collateral for credit-impaired exposures.

Figure 94: Methodology for revaluation of immovable property collateral for credit-impaired exposures



# Part 3: Next steps and areas of further work

---

## 9. Next steps and areas of further work

---

170. As previously explained, the main challenge for regulators and supervisors is to ensure high quality and consistent application of the IFRS 9 standard, since the outcome of the ECL calculation will directly impact the amount of own-funds and regulatory ratios, despite them not being in a position to validate the modelling aspects of IFRS 9, contrary to what is currently the case in prudential areas such as credit or market risk. In the light of this, the EBA will continue monitoring and promoting consistent application of IFRS 9 as well as working on the interaction with prudential requirements. In this regard, further information on the future EBA activities on the monitoring of IFRS 9 implementation are included in the following paragraphs.

### 9.1. Follow-up work on the IFRS 9 benchmarking exercise

171. As regards the IFRS 9 benchmarking exercise, going forward, the new data and information that will be collected via the ITS on supervisory benchmarking will allow to extend the scope of the exercise to a larger sample of institutions and to conduct further analyses on additional IFRS 9 parameters (i.e. the IFRS 9 LGD), in order to collect additional information on the modelling practices adopted by EU institutions. In this context, consideration will be given, *inter alia*, to the use of overlays across EU institutions, in order to investigate whether and to what extent banks will adjust their ECL models to incorporate the effect of overlays or if, by contrast, some type of overlays will be maintained, despite their expected temporary nature.

172. Moreover, in line with the staggered approach presented in the IFRS 9 roadmap, the EBA will continue its work on the in-

tegration of HDPs into the ITS on supervisory benchmarking. At the preliminary stage of the exercise, the EBA focused its angle on LDPs. The main advantage of this type of analysis is that the risk parameters can be compared for identical obligors to which the institutions are effectively exposed, limiting to a great extent one of the most challenging parts in comparative risk studies which is the distinction of the influence of risk-based and practice-based drivers. The extension of the IFRS 9 benchmarking exercise on high-default portfolios (HDPs) will definitely provide more insightful information on the sources of variability in the ECL measurement since this variability is expected to be higher for the HDPs.

- 173. However, this milestone implies a change in logic of the analysis: it would involve a comparison of the model outputs not for common counterparties but instead for commonly defined portfolios<sup>[136]</sup>. This change is a substantial one, as those commonly defined portfolios do not necessarily have the same level of risk, and therefore the outputs of the internal models are less easily comparable than in the case of common counterparties for low-default portfolios.
- 174. In this context, a greater level of complexity of the next phase of the IFRS 9 benchmarking exercise is expected. Nonetheless, the EBA already started to reflect on possible approaches to follow, including benchmarking a set of HDPs based on real data and/or a back-testing approach, leveraging to the possible extent on the methodology followed in the ITS on supervisory benchmarking of internal models for credit risk. A more detailed work plan and detailed steps will be established after the publication of this report, including contacts with banks and auditors.

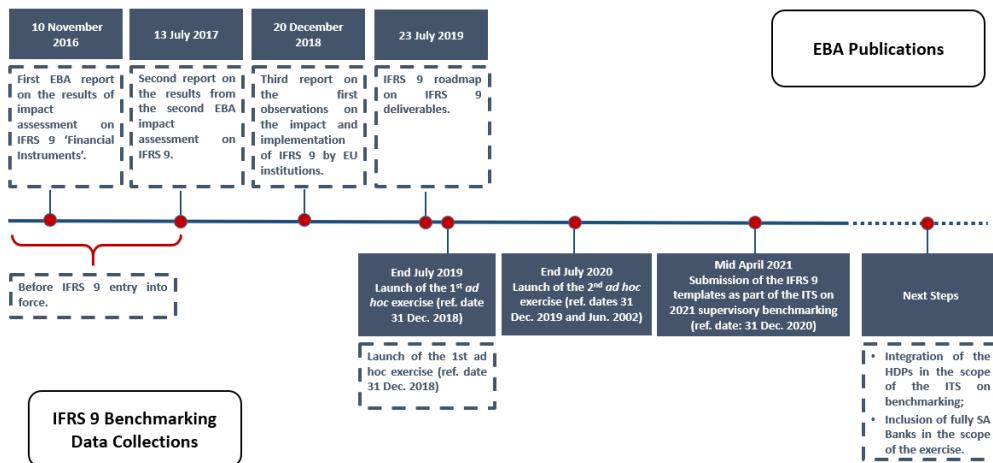
<sup>[136]</sup> e.g. 'SME in country X with no collateral'

175. In addition, at a later stage of the project, the IFRS 9 benchmarking exercise, in its quantitative dimension, will be extended also to those institutions applying the standardised approach for credit risk purposes, for which further consideration would be needed, given the more limited modelling experience.
176. Finally, the EBA will continue developing analyses and a dedicated analytical tool for supervisors to assist them in their ongoing supervision and understanding of the quality and consistency of the ECL frameworks implemented by EU banks and their interactions with the prudential requirements.

# 10. Annex

## 10.1. Annex 1: EBA publications and data collections on IFRS 9

Figure 95: Timeline with EBA Publications and Data collections on IFRS 9 since November 2016



## 10.2. Annex 2: Information on the sample of institutions within the scope of the IFRS 9 benchmarking exercise

Table 5: Representativeness of the sample of institutions within the scope of the IFRS 9 benchmarking exercise (EUR Bn)

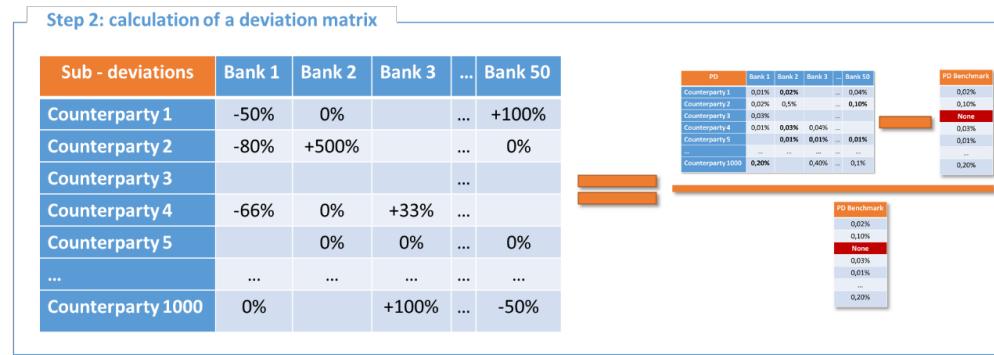
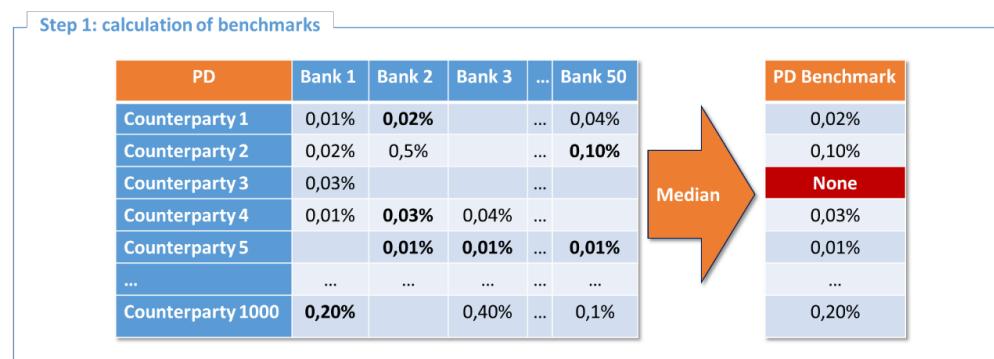
In EUR Mn	Sample of IFRS 9 Benchmarking Exercise (second ad hoc exercise)	Of which only institutions considered for the quantitative analyses (second ad hoc exercise)	Sample of institutions included in the 2021 ITS on supervisory benchmarking	EU IFRS Banking Groups at the highest level of consolidation <sup>(137)</sup>
Number of banks	47	33	56	300
Total Assets	20,670,709	19,094,116	21,487,678	33,104,066
Of which assets measured at Fair Value through Profit and Loss (FVTPL)	81,165	67,320	130,908	364,900
Of which assets measured at Fair Value through Other Comprehensive Income (FVOCI)	1,020,066	910,475	1,064,030	1,978,371
Of which assets measured at Amortised Cost (AC)	12,040,000	11,112,036	12,552,351	18,893,259
Low Default Portfolio exposures	10,938,192	10,160,432	11,633,870	17,586,598
Sovereigns	5,224,215	4,736,627	5,435,254	8,680,986
Institutions	1,326,823	1,305,123	1,508,703	2,334,502
Large Corporates (LCOR, CORP, COSP)	4,387,154	4,118,681	4,689,912	6,571,110

<sup>(137)</sup> EU IFRS Banking groups reporting FINREP, template F1.1 and COREP, either C.7.a and/or C8.1.a.

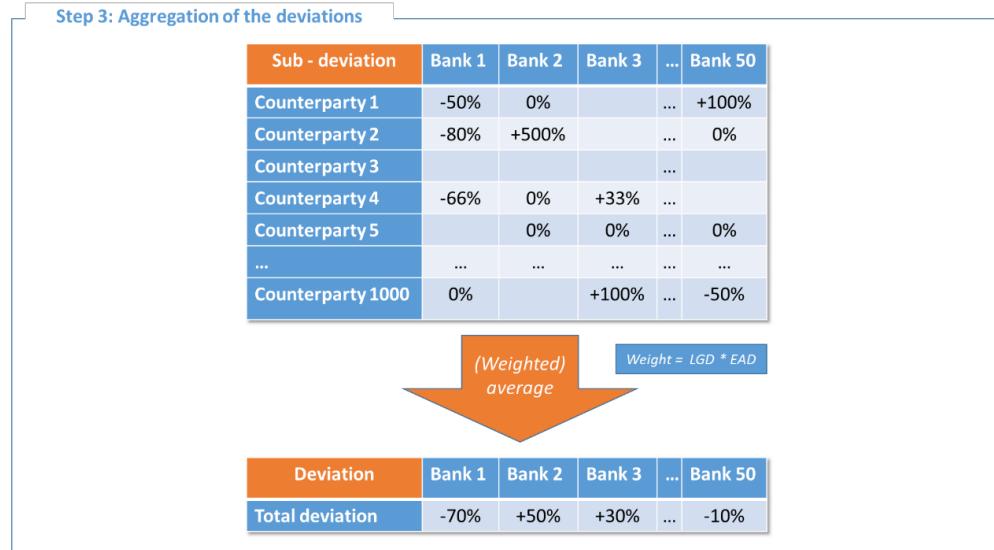
### 10.3. Annex 3: Methodology to measure PD variability

1. The methodology used for measuring the variability in the PD 12-month estimates, is based on a comparison between:
  - the PD estimates reported by the institutions in the sample; and
  - the benchmark PD calculated for each common counterparty via the median of the estimates given to the counterparty at stake, to the extent that there are PD estimates available from three different institutions.
2. This comparison is done at the counterparty level, where a sub deviation is calculated between the own estimate and the benchmark.

3. The benchmarks are calculated independently of the regulatory approach used to calculate RWA (AIRB, FIRB and SA). This means that for a given counterparty, the PD IFRS 9 estimated by banks using the AIRB approach, FIRB and SA are all used to calculate a single PD IFRS 9 benchmark. When an institution has reported the same counterparty under several regulatory approach, the weighted average (with the exposure value) of the risk parameters has been considered for that counterparty, for that particular bank. This is based on the consideration that the level of default risk for a given counterparty should be independent from the regulatory approach used to calculate RWA. This approach also increases the number of common counterparties used for the analysis, as the constraint on the minimum number of estimates to calculate a benchmark is easier to meet if performed across regulatory approaches.



4. In practice, two sub deviations are calculated:
  - The absolute deviation, where the difference between the own estimate and the benchmark remains as it is.
  - The relative deviations, where the difference between the own estimate and the benchmark is expressed relative to the benchmark value;
5. In a third step, the sub deviations calculated at the counterparty level are aggregated for each bank, in order to have a single deviation.



6. In practice, the relative deviation is aggregated with a **weighted average** of the sub deviations. The weight used is the multiplication of the exposure value by the LGD of the counterparty. This calculation method takes into account the materiality of the exposures and is therefore closer to the real deviation observed at total portfolio level; the disadvantage is that in practice, the deviations are sensitive to a low number of counterparties (i.e. those with higher EAD);
7. By construction, the deviations are on average close to 0. Hence, the analysis of the results should not be focused on the deviation of the average bank, but rather on the magnitude of the distance between the conservative and the aggressive estimates (i.e. the interquartile range). Hence, an additional level of aggregation is added to obtain a single metric that summarises the observed values of all the banks to represent this general distance. Specifically, the general distance of the whole sample is represented as the **ratio** of the deviation from the conservative banks (defined as the third quartile of the deviation) over the deviation of less conservative banks (defined as the first quartile of the deviation). That is:
8. The following example can be useful to understand the metric:
  - Bank A has conservative estimates, leading to an overestimation of 33% of the PD (and therefore also is the ECL as this is linear with respect to PDs) (deviation of +33%)
  - Bank B has less conservative estimates, leading to an underestimation of 33% of the ECL (deviation of -33%)
  - Bank C has estimates approximately in between the estimates of bank A and bank B, leading to ECL in between the ECL of bank A and bank (deviation of 0%)
9. The important fact is not that the average bank has a 0% deviation, but rather the difference between conservative and aggressive estimates. Since we are dealing with relative deviations, the relevant metric is the ratio between conservative and less conservative estimates:  $\frac{1+33\%}{1-33\%} = 2$ . In other words, the difference between conservative and less conservatives estimate can lead to a difference of a factor 2 in the ECL.

$$Ratio = \frac{1+Q3(\text{Deviations})}{1+Q1(\text{Deviations})}$$

## 10.4. Annex 4: Kendall tau and correlation

10. The commonalities of ranking between two vectors can be measured via in par-

ticular two metrics: the correlation between the two vectors and their Kendall tau coefficient.

11. The Kendall tau coefficient is defined, for two vectors of  $n$  PDs of common obligors, as:

$$\tau = \frac{(number\ of\ pairs\ with\ same\ rank) - (number\ of\ pairs\ with\ different\ rank)}{\frac{n \cdot (n-1)}{2}}$$

A Kendall tau equal to 1 means the institutions rank their common counterparties in the same manner, while a Kendall tau equal to -1 means the institutions

rank their common counterparties in opposite manners. For example, this coefficient gives the following values for the simplified example presented in Table 5:

12. Table 6: Example on the Kendall tau coefficient

PD estimates	PD IRB	PD IRB adjusted	PD IRB IFRS 9
Counterparty 1	1%	1%	4%
Counterparty 2	2%	5%	5%
Counterparty 3	3%	6%	2%
Counterparty 4	10%	7%	3%

13. The four estimates per bank give six pairs of rankings: [1-2], [1-3], [1-4], [2-3], [2-4], [3-4].

$$\tau_{IRB-IRBadj} = \frac{6-0}{\frac{4 \cdot 3}{2}} = 1; \tau_{IRB-IFRS9} = \frac{2-4}{\frac{4 \cdot 3}{2}} = -0.3;$$

$$\tau_{IRBadj-IFRS9} = \frac{2-4}{\frac{4 \cdot 3}{2}} = -0.3$$

14. While the Kendall tau and the correlation are similar metrics, they can lead to different results. For instance, while the ranking of PD IRB and PRD IRB adjusted are similar (hence leading to a Kendall tau of 1), the fluctuation and 'extreme' values are different (counterparty 1 for PD IRB and counterparty 4 for PD IRB adjusted), hence leading to a relatively low correlation (70%).

15. It is also interesting to note that in the context of credit risk modelling, a significant number of pairs may have the same value (e.g. PD counterparty 1 = PD counterparty 2 = 1%), given that this occurs as soon as counterparties fall in the same grade or pool. In this context, the Kendall Tau metric deals in a separate way with these pairs:

- 1) If the pair of values are the same for both vector (e.g. PD IRB counterparty 1 = PD IRB counterparty 2 = 1% and PD IFRS 9 counterparty 1 = PD IFRS 9 counterparty 2 = 4%), this pair is not considered in the Kendall tau metric
- 2) If the pair of value is the same only for 1 vector (e.g. PD IRB counterparty 1 = PD IRB counterparty 2 = 1% but PD IFRS 9 counterparty 1 = 4% and PD IFRS 9 counterparty 2 = 5%), the Kendall tau metric will account for this pair has been 'broadly consistent'. In practice, this pair will not be counted in the numerator, and the denominator will be the geometrical average between the number of 'different pairs' for each vector. For instance, based on the previous Example, if the PD IRB of counterparty 2 is 2% instead of 1%, the Kendall tau between the PD IRB and the PD IRB adjusted will no longer be equal to 1, but instead adjusted for this pair:

$$\tau_{IRB-IRBadj} = \frac{6-1-0}{\sqrt{\frac{4 \cdot 3}{2} - 1 \cdot \frac{4 \cdot 3}{2}}} = 0.91$$

## 10.5. Annex 5: Table per country with detailed overview of the application of IFRS 9 transitional arrangements

	December 2019			December 2020					
	No application of transitional arrangements	Solely application of paragraph 2 of Article 4/73a CRR2	Application of paragraphs 2 and 4 of Article 73a CRR2	Total number	No application of transitional arrangements	Solely application of paragraph 2 of Article 4/73a CRR2	Solely application of paragraph 4 of Article 4/73a CRR2	Application of paragraphs 2 and 4 of Article 4/73a CRR2	Total number
Austria	15	0	1	16	10	0	0	2	4
Belgium	12	0	1	13	8	0	0	1	4
Bulgaria	5	5	2	12	5	5	0	0	13
Croatia	9	4	2	15	9	4	0	0	12
Cyprus	1	0	2	3	1	0	0	0	15
Czech Republic	No answer	No answer	No answer	No answer	No answer	No answer	No answer	No answer	3
Denmark	51	6	10	67	51	5	0	0	67
Estonia	7	1	1	9	7	1	0	0	9
Finland	10	0	1	11	10	0	0	0	11
France	10	0	0	10	7	0	0	0	10
Germany	20	0	0	20	15	0	0	1	20
Greece	2	1	12	15	2	1	0	0	15
Hungary	16	0	4	20	14	0	0	0	18
Ireland	11	0	5	16	11	0	0	0	16
Italy	73	20	88	181	68	17	0	92	177
Latvia	7	1	5	13	7	1	0	0	13
Lithuania	3	0	0	3	3	0	0	0	3
Luxembourg	53	0	1	54	53	0	0	0	55
Malta	12	4	3	19	12	1	1	5	19
Netherlands	5	0	0	5	3	0	0	1	5
Poland	2	2	8	12	2	3	0	0	12
Portugal	23	2	11	36	24	3	0	10	37
Romania	0	1	12	13	0	1	0	12	13
Slovakia	3	0	1	4	3	0	0	1	4
Slovenia	10	0	0	10	8	0	1	0	9
Spain	60	7	8	75	55	3	0	17	75
Sweden	93	2	10	105	95	2	0	10	107
Total	513	56	188	757	483	47	7	217	754
Total [%]	67,77%	74,40%	24,83%	100,00%	64,06%	6,23%	0,93%	28,78%	100,00%

## GETTING IN TOUCH WITH THE EU

### In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: [https://europa.eu/european-union/contact\\_en](https://europa.eu/european-union/contact_en)

### On the phone or by email

Europe Direct is a service that answers your questions about the European Union.

You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696 or
- by email via: [https://europa.eu/european-union/contact\\_en](https://europa.eu/european-union/contact_en)

## FINDING INFORMATION ABOUT THE EU

### Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: [https://europa.eu/european-union/index\\_en](https://europa.eu/european-union/index_en)

### EU Publications

You can download or order free and priced EU publications at:

<https://publications.europa.eu/en/publications>.

Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see [https://europa.eu/european-union/contact\\_en](https://europa.eu/european-union/contact_en)).

### EU law and related documents

For access to legal information from the EU, including all EU law since 1952 in all the official language versions, go to EUR-Lex at: <http://eur-lex.europa.eu>

### Open data from the EU

The EU Open Data Portal (<https://data.europa.eu/euodp/en/home>) provides access to datasets from the EU. Data can be downloaded and reused for free, for both commercial and non-commercial purposes.

## **EUROPEAN BANKING AUTHORITY**

---

Tour Europlaza, 20 avenue André Prothin, CS 30154  
92927 Paris La Défense CEDEX, FRANCE

---

Tel. +33 186 52 70 00  
E-mail: [info@eba.europa.eu](mailto:info@eba.europa.eu)

---

<https://eba.europa.eu>



**Publications Office  
of the European Union**