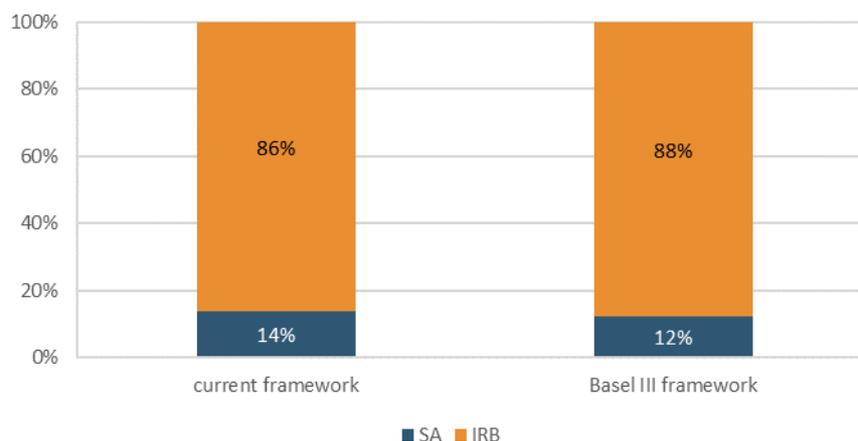


Annex 1: Specialised lending

Overview of the use of regulatory approaches and portfolio composition

1. **In terms of use of regulatory approaches**, Figure 1 shows that most of the risk-weighted assets (RWA) of the Specialised Lending Exposures (SLE) are calculated according to the internal rating-based (IRB) approach (including Supervisory Slotting Criteria), with roughly half of the institutions in the sample using the advanced IRB approach (A-IRB). This is an expected result, as the complexity of the SLE business model requires strong risk analytical skills and banks engaging in this typically have IRB models, which the analysis can be built on. This also partially explains why the LGD input floors, which only applies to A-IRB institutions, are overall particularly impactful for this exposure class.
2. The analysis also highlights that, across all the institutions in the EU, the standardised approach (SA) is mainly used as a backstop to internal models for the specialised lending portfolio, as opposed to other exposure classes where many institutions use the SA as their primary approach. This was already made clear in the report providing the Policy Advice on Basel III reforms for the credit risk framework, as it showed that despite significant increases in the SA risk weights, the impact was quite limited due to the limited amount of exposures under the SA.

Figure 1 Share of SLE RWA by regulatory approach in the current and revised framework



Sources: EBA 2018-Q2 QIS data and EBA calculations.
 Note: Based on a sample of 204 banks: IRB (78), SA (196).

3. **In terms of portfolio composition**, Table 1 shows that 42% of total current SLE are income producing real estate (IPRE) exposures, while high-volatility commercial real estate exposures are not material (1%).

Table 1 Share of SL exposures per by sub-exposure class in the current framework (over the total exposure value of SLE, including SA exposures), by size

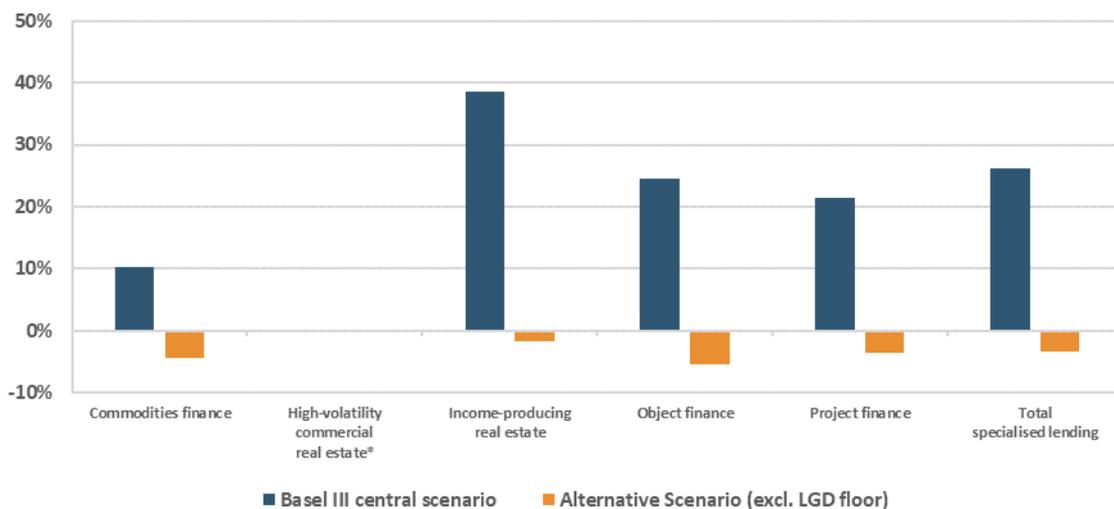
	CF under IRB approach (%)	HVCRE under IRB approach (%)	IPRE under IRB approach (%)	OF under IRB approach (%)	PF under IRB approach (%)	Total SLE under IRB approach (%)
All banks	8	1	42	14	29	94
Large	8	1	42	13	29	93
of which: G-SIIs	7	0	15	7	13	43
of which: O-SIIs	1	1	17	6	15	40
Medium	0	0	0	0	0	1

Sources: EBA 2018-Q2 QIS data and EBA calculations.
 Note: Based on a sample of 204 banks: IRB (78), SA (196).

Impact of the LGD input floors

4. **In terms of relative impact**, Figure 2 illustrates the importance of the LGD input floor on SLE treated under the A-IRB. The A-IRB is of particular importance in order to understand what drives the increase of RWA, as the RWA under the foundation IRB approach (F-IRB) are subject to a lower impact.¹ For the A-IRB, the LGD input floors increase the RWA by 29 pp (from -3% to 26%) and is evenly distributed between the different sub-exposure classes.

Figure 2 Percentage change in AIRB RWA (relative to sub-exposure class AIRB RWA), per sub-exposure class



Sources: EBA 2018-Q2 QIS data and EBA calculations.
 Note: Based on a sample of 44 banks. * Not shown in the chart because fewer than three entities in the cluster.

¹ The F-IRB RWA also change, for instance, they are expected to increase as a result of the higher PD floors. However, the overall impact is much more limited, and can even result in an RWA decrease due to the removal of the 1.06 multiplier in the IRB formula and the recalibration of the supervisory LGD values.

5. It is however important to stress that this analysis is based on a limited sample of institutions, although covering a substantial share of RWA. While in total, there are 78 IRB institutions in the overall sample, only 44 IRB institutions were able to provide data for the marginal scenario (i.e. final Basel III without the LGD input floors), of which **only 16 institutions have SLE**. These 16 institutions represents 68.8% of the RWA calculated under the AIRB for SLE². Furthermore, the RWA calculated under the A-IRB approach only represents around half of the RWA calculated under IRB approaches (Table 2).

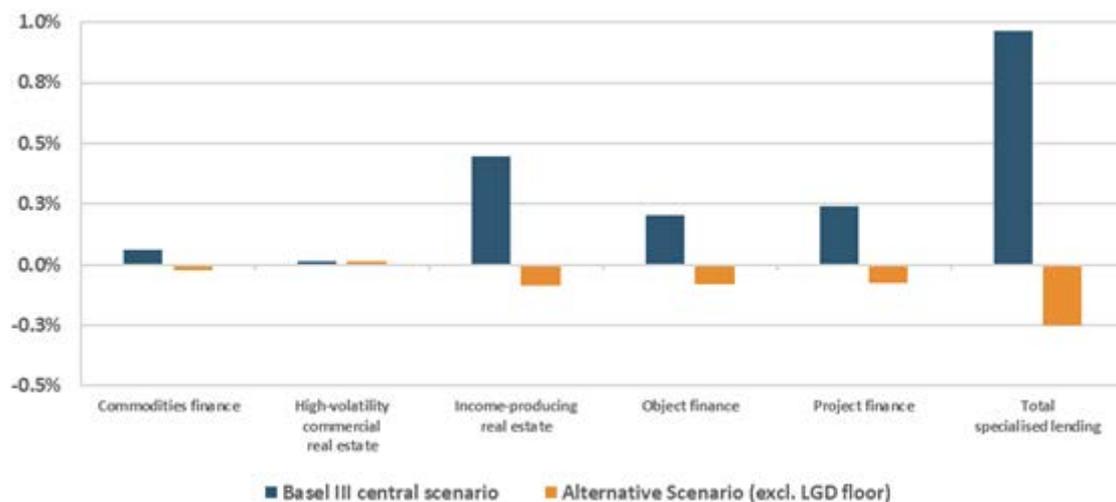
Table 2 Share of SLE RWA (% of SLE IRB RWA), by regulatory approach

Regulatory approach	Current (%)	Revised (%)
A-IRB approach	53	61
F-IRB approach	29	23
Slotting approach	18	16

Sources: EBA 2018-Q2 QIS data and EBA calculations.
 Note: Based on a sample of 78 banks.

6. **In terms of absolute impact** (i.e. combining the relative impact with the volume of the sub exposure class), Figure 3 shows that, consistently with the relative impact of Basel III on IPRE and its size, the IPRE sub exposure class is the one driving most of the impact at the aggregated level. The rest of the impact mainly comes from the project and object finance sub exposure class. On the other hand, the impact on the HVCRE portfolio explains only a small fraction of the impact of the Basel III reform on the institutions’ overall IRB portfolio.

Figure 3 Percentage change in IRB RWA per exposure class (relative to total IRB RWA)



Sources: EBA 2018-Q2 QIS data and EBA calculations.
 Note: Based on a sample of 44 banks.

² Table 4 in the annex provides further details on the sample size, per regulatory approaches and specialised lending categories

7. Overall, the impact of modelling changes on the specialised lending portfolio is modest in terms of capital impact (with less than 1% increase of total IRB RWA determined by Specialised Lending), especially considering the share of A-IRB RWA for SLE compared to overall SLE RWA. At the same time, it should be noted that the present infrastructure supporting factor would, if maintained, reduce the impact, mostly for project finance exposure classes³.
8. Should it be considered that the treatment of SLE needs further refinements, the EBA stands ready to further assist the Commission on the most appropriate regulatory requirements to be developed. This complex project would necessitate further analyses, potentially based on additional data collection, in coordination with different stakeholders. It should therefore be given a realistic timeline.

Other considerations

9. One aspect, which has also been raised in the context of specialised lending is the impact of the output floor. By construction, the output floor is a measure, which operates at the aggregate level and a direct attribution of the effect is therefore not possible to singled-out risk types nor portfolios. Specifically, a capital change related to the output floor does not directly impact specialised lending exposures, as it is not calculated at the exposure nor at sub-exposure class level.
10. However, Table 3 shows that the total impact of the revised Basel III reforms remains unchanged (24.4%⁴) whether the LGD input floors for SLE are included or removed. As a matter of fact, the exclusion of the LGD input floors for SLE will decrease the overall impact of the IRB reforms by 0.4 pp (from 2.7% as presented in the August 2019 report to 2.3%⁴), but this lower impact will be completely compensated by a higher output floor impact (from 9.1% as presented in the August 2019 report to 9.5%). The exclusion of the LGD input floor for SLE would benefit mostly large IRB institutions. However, these benefits would not materialise as these institutions, in general, are also the institutions constrained by the output floor (10 out of the 14 institutions in the sample with SLE treated under the A-IRB are constrained by the output floor).

³ As stated in the previous answer to the Cfa, results related to the infrastructure supporting factor for IRB exposures “should be interpreted with caution, as they are driven by 12 institutions that identified compliant exposures within their portfolios”. For the SA exposures, the results were driven by only 4 institutions.

⁴ See Table 1 in August 2019 Report [Basel III reforms: impact study and key recommendations](#), European Banking Authority (EBA) (2019).

Table 3 Percentage change in T1 MRC (relative to current T1 MRC) under alternative implementation scenario (excl. LGD input floor for specialised lending exposure), by bank size

	Δ SA	Δ IRB	Δ CCP	Δ SEC	Δ MKT	Δ OP	Δ CVA	Δ LR	Δ OF	Δ Total
All banks	2.7%	2.3%	0.1%	0.6%	2.5%	3.3%	3.9%	-0.5%	9.5%	24.4%
Large	2.3%	2.4%	0.1%	0.7%	2.6%	3.4%	4.1%	-0.5%	9.9%	25.0%
of which G-SIIs	1.7%	2.7%	-0.1%	1.2%	4.2%	5.5%	5.1%	0.0%	8.4%	28.6%
of which O-SIIs	2.3%	1.7%	0.2%	0.3%	1.6%	2.1%	3.7%	-0.5%	12.2%	23.6%
Medium	9.7%	0.0%	0.0%	0.0%	0.9%	0.3%	0.5%	-1.1%	1.0%	11.2%
Small	10.7%	0.0%	0.2%	-1.9%	0.0%	-3.7%	0.3%	-0.1%	0.0%	5.5%

Sources: EBA 2018-Q2 QIS data and EBA calculations.

Notes: Based on a sample of 189 banks: Large (104), of which G-SII (8), of which O-SII (67); Medium (61); Small (24). SA, standardised approach to credit risk; IRB, internal rating-based approach to credit risk; CCP, central counterparty; SEC, securitisation; MKT, market risk; OP, operational risk; CVA, credit valuation adjustment; LR, leverage ratio; OF, output floor.

11. One argument received by the EBA is that institutions constrained by the output floor may consider the impact at a lower level for their internal capital allocation, and therefore compute the marginal impact of the output floor at the exposure class level. The argument comes from the fact that for an identical exposure, the future SA results in RWA about two and a half times higher than the RWA calculated under the A-IRB approach without LGD input floors.⁵ However, applying the output floor at the sub-exposure level touches on aspects, which are beyond the regulatory remit.
12. First and foremost, EBA has not made such comparisons between the IRB approach and the SA in the past, for the simple reason that this is not aligned with the regulatory design of the output floor which operates as a backstop measure at the bank level, with free allocation of capital being possible within the institution. Therefore, it is a bank-specific choice in terms of facilitating internal capital allocation and pricing. Secondly, the potential impact across banks will only exist for banks constrained by the output floor, which in the sample presented here is 10 out of 14 banks. Finally, even if the output floor would be applied at the sub-exposure level for pricing and capital allocation, the consequences drawn will also depend on broader business strategy considerations and would therefore be highly speculative to assess, especially as institutions will have several measures available to adapting the effects of the output floor. Therefore results cannot be interpreted as an increase in total capital requirements
13. Moreover, calculating the output floor at the exposures class level ignores the significant reduction in the “effective” floor level for modelled RWAs, because of the presence of non-modelled RWAs. Two similar banks in terms of modelled credit and market risk RWAs could experience a significantly different bindingness of the output floor, due to the relative importance of current non-modelled RWAs: the higher this share, the less binding the output floor will be. While the magnitude of this effect depends on the share of use of standardised approaches, the effective floor is on average significantly below 72.5%. Given banks are used to dealing with diversification benefits in their capital allocation schemes, one might expect that

⁵ The ratio of RWA under the SA divided by RWA under the IRB approach is however lower if it considers the baseline IRB framework including the LGD input floors (from 2.5 to 1.9).

they develop more sophisticated approaches for internal capital allocation in the coming years. Moreover, such impact of this artificial output floor applied at the SLE level is not necessary an unintended consequence of the framework. In fact, modelling this kind of exposures is complex due to a lack of data and the complexity of the transactions themselves. Furthermore, the IRB framework requires institutions to use LGDs that are appropriate for an economic downturn. In this regard, the former lack of explicit guidance⁶ and limited supervisory and industry consensus on how to incorporate the economic downturn component in model estimation led to significant differences in practices and gave rise to unwarranted variability in risk-weighted exposure amounts. For SLE, this was further exacerbated by the fact that these portfolios are generally low default portfolios ('LDP') in nature, thus leading to even higher complexities for their modelling and to encompassing additional expert based approaches often resulting in additional variability.

14. Last, the impact needs to be put into the context of the economic conditions under which PDs and LGDs are currently estimated for specialised lending. In particular, the LGD estimates are required to be appropriate for an economic downturn, if more conservative than the long run average (as required by article 181(1)(b) of the CRR). Hence, the appropriateness of the LGD input floors should be assessed with respect to the value of as the observed losses during an economic downturn. The relative improvement of economic conditions over the more recent years must not distract from the heavy losses suffered from specialised lending under adverse market conditions.

⁶ Nevertheless, the review of the IRB approach recently completed by the EBA will foster a more thorough and harmonised modelling of downturn LGDs, by means of the adoption of the dedicated regulatory products issued on the topic, in particular the RTS on economic downturn (EBA/RTS/2018/04) and the Guidelines for downturn LGD estimation (EBA/GL/2019/03).