Hertie School
Jacques Delors Centre

Policy Brief

The final piece of the Basel III jigsaw fits

Banks and unrated corporates can handle the output floor

Sebastian Mack, Policy Fellow

21 December 2021

#Basel3
#OutputFloor
#Unrated

The European Commission has proposed implementing the outstanding elements of the international banking reforms agreed in the wake of the global financial crisis. The final Basel III rules are designed to curb any under-estimating of risks by banks when using internal models. The introduction of the output floor as lower bound for determining banks' capital requirements will foster fair competition between banks using internal models and those that do not. The output floor will predominantly affect loans to large unrated corporates. It can be assumed that the resulting capital increase will be digestible for the banks with only limited effects on the real economy. Requiring all EU corporates to seek an external credit rating would not reduce the impact of the output floor as only a fraction of these firms demonstrates high creditworthiness. However, increasing the rating coverage of EU corporates would provide banks with additional information on borrowers and thus improve their risk management capabilities. In the absence of any public European rating agency, national central banks should follow the example of the Banque de France and establish public rating registers for large EU corporates.

The EU has reached the final mile of the international banking reforms agreed in the aftermath of the global financial crisis. Between 2007 and 2009, it became obvious that banks had massively underestimated the risks associated with their business and were thus undercapitalised. Subsequently, governments across the world were forced to stabilise the financial system by using taxpayers' money to bail out distressed banks. With the aim of increasing banks' future resilience, political decision-makers tasked the Basel Committee on Banking Supervision with overhauling international banking regulation. This process known as "Basel III" concluded with two reform packages: The first, adopted in December 2010, increased, inter alia, the quantity and quality of capital that banks need to hold to absorb potential losses. In 2017, the Basel Committee adopted a second set of reforms dubbed "Finalization of Basel III". It focused on the risk side, i.e. the procedures for determining the riskiness of banks' assets. To implement the first round of Basel reforms, the EU in 2013 adopted the Capital Requirements Regulation (CRR) and amended the Capital Requirements Directive (CRD IV), with further changes in 2019 (CRR2 and CRD V, respectively).

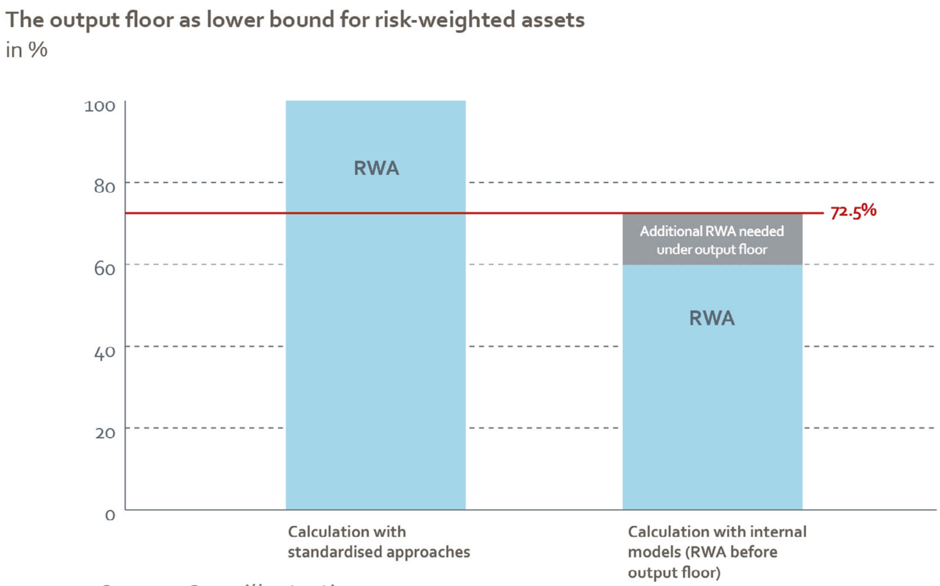
On 27 October 2021, the European Commission proposed CRR3 and CRD VI to implement the outstanding elements of the final Basel III standards in Europe. Its core proposal is the "output floor", a measure to limit the leeway of banks using their own models to quantify risk so as to determine their individual capital requirements. Critics have expressed concerns that the output floor could significantly worsen financing conditions for the many companies in Europe that do not have access to any external credit rating. This policy brief argues that the Basel output floor will increase capital requirements for some banks, but will not lead to significantly higher borrowing costs if any for all unrated companies. The output floor will predominantly affect loans to large unrated corporates. Requiring all EU corporates to seek an external credit rating would not reduce the impact of the output floor as only a fraction of these demonstrates high creditworthiness. However, increasing the rating coverage of EU corporates would provide banks with additional information on borrowers and thus improve their own risk management. Section 1 introduces the rationale for the output floor and its mechanics. Section 2 assesses the output floor's impact on banks' capital requirement and financing of the real economy. Section 3 makes a proposal to advance rating coverage among large EU corporates.

1 Rationale and mechanics of the output floor

The riskiness of banks' business determines their capital requirement. A core objective of the final Basel III rules is to prevent banks from underestimating risks. Banks' risk exposure is expressed in risk weighted assets (RWA) and equals the sum of credit risk, market risk, and operational risk. When it comes to credit risk, RWA are calculated by multiplying the exposure amount with the relevant risk weight for the type of loan or asset. Banks can generally choose among two approaches to quantify RWA. They can either use the standardised approach (SA) and apply risk weights pre-defined by law for each exposure class or they can use the internal ratings-based approach (IRBA) and calculate the applicable risk weights with the help of internal models that they themselves draw up. If banks use internal models, they can generally reduce their regulatory capital requirement compared to under the SA.

To prevent banks from abusing internal models so as to unduly reduce capital requirements, the Basel Committee agreed on the output floor as the lower limit for internal RWA calculations. Through the output floor, an IRBA bank's RWA must be at least 72.5% of the RWA that would result if the institution's entire portfolio had been valued exclusively with standardised approaches (Chart 1). The capital saving for banks that use their own models is thus limited to 27.5%. Since the SA is the benchmark for calculating the output floor, the impact on IRBA banks' capital requirement depends on the difference between SA risk weights and the risk weights currently applied by IRBA banks.

Chart 1: The output floor as lower bound for risk-weighted assets



Source: Own illustration.

Under the SA, the prudential treatment of an individual loan to companies depends on the loan amount, the turnover of the company and its external rating, if available. First, company loans up to €1 million fall into the retail exposure class and get a 75% risk weight (Article 123 CRR). Second, company loans exceeding €1 million fall into the corporate exposure class (Article 122 CRR). Depending on the external credit rating of the company, the risk weight then is in the range of 20% to 150%. If no external credit rating is available, a risk weight of 100% applies. Third, the risk weights for loans to small and medium-sized companies (SMEs) with an annual turnover not exceeding €50 million receive a discount under European law, irrespective of the exposure class or the company rating. This so-called SME supporting factor (Article 501 CRR) reduces the applicable risk weight by 23.81% (for an amount up to €2.5 million), or 15% (for an amount exceeding €2.5 million) respectively.

Table 1 summarises the risk weights that apply to loans to companies granted by banks using the SA. Basel III final and the latest Commission proposals (CRR3) do not foresee any changes to SA credit risk weights applicable to company loans. Only the risk weight applicable to loans to corporates falling within credit quality step 3 is reduced from 100% to 75%.

Table 1: Risk weights for loans to companies under the credit risk standardised approach (CRR3)

Exposure class	Retail (loans up to €1 mio)	Corporate (loans exceeding €1 mio					
Credit quality step (S&P rating scale)	n/a	1 (AAA to AA)	2 (A+ to A-)	3 (BBB+ to BBB-)	unrated or 4 (BB+ to BB-)	5 (B+ to B-)	6 (CCC to D)
no SME (turnover > €50 mio)	75%	20%	50%	75%	100%	150%	150%
SME (turnover < €50 mio)	57%	15%	38%	57%	76%	114%	114%

Notes: Risk weights for SME exposures assuming a loan up to €2.5 billion. Source: Own calculations.

The output floor will predominantly affect exposures to unrated non-SME corporates. For externally rated corporates, the risk weights applied by IRBA banks are already estimated to be relatively close to the SA risk weights. The same is true for loans granted within the retail exposure class and for loans to corporate SMEs, where risk weights are low in any case under the SA. However, if non-SME corporates don't possess an external credit rating but are classified as low risk by the bank, the risk weights calculated under the IRBA can be expected to be substantially lower than the 100% required under the SA. Consequently, the need to correct risk weights upwards will be stronger for exposures to large unrated corporates than for retail or SME loans. Since 80% of non-SME corporate exposures are currently unrated, the output floor will be relevant for a substantial part of IRBA banks' corporate loan portfolio. The European Commission therefore has proposed a transitional provision that would allow IRBA banks, in calculating the output floor, to apply a risk weight of 65% to unrated corporates until end-2032, if the bank judges the corporate to be of investment grade.

2 Limited impact on corporate finance in Europe

In Europe, bank financing accounts for about 70% of total financing of the economy. Many companies – in particular SMEs – do not go to the capital markets for financing and, even if they do, they do not typically seek external credit ratings. This reluctance can be attributed to the substantial cost of obtaining a rating from credit rating agencies that, according to the European Commission, charge a SME between €40,000 and €50,000 for the initial evaluation, and then €30,000 to €35,000 annually for updating the rating. For bigger companies with a more complex business structure, the costs can be assumed to be higher. Another reason why many companies do not seek external ratings is their preference for keeping corporate financial data secret. While bank-funded European businesses are less prone to financial markets' short-termism than e.g. their US rivals, they are more sensitive to any change in bank lending costs.

The banking industry expects the output floor to increase capital requirements for unrated low-risk assets and warns that this would translate into higher borrowing costs for end-customers and lower investments. Since data on the risk weights that IRBA banks currently apply to unrated corporates is not publicly available, there is no evidence for such gloomy predictions. However, even without the numbers at hand, the banking industry's prediction that the output floor would penalise European companies turns out to be simplistic and premature.

First, the output floor affects only the RWA calculation of IRBA banks. The EU Commission proposal for the implementation of the final Basel III rules doesn't change the risk weights applicable under the SA. For the largest banks in the Banking Union, the ECB reports that €2,364 bn in corporate exposure are currently on the balance sheets of IRBA banks, whereas €968 bn are held by SA banks. The output floor will therefore not affect about one third of the total corporate exposure. Here, it is important to note that internal models are predominantly used by large banks under direct ECB supervision ("significant institutions") whereas almost all smaller banks ("less significant institutions") use standardised approaches.[1]

Second, it is important to note that the output floor is calculated at the overall bank level, i.e. by including all credit risk exposure classes and also market risk and operational risk. The output floor increases IRBA banks' capital requirement only if the exposure to unrated corporates is examined in isolation, i.e. when leaving all other exposures classes and risk categories aside. However, to assume that a bank has granted loans only to unrated corporates and holds no other assets on its balance sheet is unrealistic. Instead, an aggregate view of the output floor suggests that banks can offset the RWA shortfall in one place with a RWA excess somewhere else. The increase of IRBA banks' capital requirement will thus be limited, even if they have so far been applying extremely low risk weights to exposures to unrated corporates.

1 Dietz, Thomas, Bankgeschäftliche Prüfungen im Rahmen der Bankenunion: Inhalte, Ablauf, Erkenntnisse, 2019, Seite 88.

Third, there are already backstops in place that limit the underestimation of risks by internal models and thus mitigate the impact of the output floor on RWA. In the first place, internal models are subject to approval by the respective prudential supervisor, so banks cannot randomly optimise them. Then, the ECB together with national supervisors checked the appropriateness and reliability of banks' internal models during a multi-year project. Based on the findings of this Targeted Review of Internal Models (TRIM), banks had to restrict or modify the use of models that performed poorly. Since TRIM has already increased RWA by about €275 bn over the last four years, the need for additional corrections stemming from the introduction of the output floor can be assumed to be less pronounced. Finally, since June 2021, the binding leverage ratio requirement serves as a backstop to risk-weighted capital requirements. The leverage ratio expresses a bank's capital in relation to its assets, but irrespective of how risky these are. An increase in the risk-weighted capital requirement will be no problem for those banks for which the leverage ratio is the more binding requirement.

Fourth, where the output floor increases IRBA banks' capital requirement, they will nevertheless continue to save capital compared to SA banks. According to the ECB, the average risk weight applied to corporate exposures in the second quarter of 2021 was 86.31% for SA banks, but only 46.61% for IRBA banks. In other words: per €100 in corporate loans, IRBA banks currently save €3.18 of capital compared to SA banks. The output floor will indeed limit the discount on RWA that IRBA banks can achieve through internal models, but the resulting capital requirement will still be 27.5% lower than compared to SA banks.

Fifth, the effect of higher capital requirements on banks' refinancing costs is ambiguous. In general, equity is more expensive than debt. However, higher capitalisation also reduces the banks' probability of default and can thus be expected to lower the cost of both debt and equity. Therefore, an increase in capital requirements does not have to translate into an immediate increase in banks' weighted average cost of capital (WACC).

Sixth, there is no reason why higher capital requirements should stop IRBA banks from engaging in the financing of the real economy. Within the Single Supervisory Mechanism, SA banks provide one third of corporate loans although the risk weights they apply are substantially higher than the ones set by IRBA banks. The output floor will reduce the discount for IRBA banks. However, they will continue to have a comparative advantage to SA banks, so there is no reason why IRBA banks should no longer be able to finance companies. The output floor might take away some of IRBA banks' extra gains, but corporate finance will continue to be a profitable business.

Seventh, whether IRBA banks will be able to demand higher interest rates to compensate for increased capital requirements depends on their individual market power. Since Europe is said to be overbanked, the level of competition can be assumed to be high and thus banks' scope for increasing interest rates can be expected to be tiny. Only the biggest banks seem to defy the overcapacity in the EU banking system and command a degree of pricing power.

Finally, if IRBA banks increased interest rates for loans to unrated non-SME corporates, this would at first reduce the competitive inequality that exists between SMEs and large corporates. According to the latest ECB survey on the access to finance of enterprises in the euro area, the average interest rate charged to large enterprises on credit lines was around 129 basis points lower than that paid by SMEs. Given that large companies currently report easier access to finance than SMEs, they can be expected to be able to absorb a modest increase in interest rates.

All in all, introducing an output floor does not per se penalise unrated companies or endanger corporate finance in Europe, but first and foremost fosters fair competition between banks.

3 A proposal to increase rating coverage among large EU corporates

The previous section has shown that the output floor is most relevant for loans to unrated non-SME corporates. The resulting capital increase can be assumed to be easily digestible for IRBA banks and a rise in interest rates for unrated large corporates, if any, would not unduly burden them. Increasing the rating coverage among EU firms would benefit banks with regard to the 30% of non-SME corporate exposures that the EBA estimates to qualify as investment grade. Provided with a rating, their risk weights would fall from 100% for unrated exposures to between 20% and 75%. The risk weights for the other 70% of large corporate exposures that do not have investment grade would either remain unchanged at 100% or even rise to 150%. Once all corporates have an external rating, their average (equal-exposure) risk-weight is expected to be around 85%. Increasing the rating coverage will thus mitigate the impact of the output floor only for exposures to corporates with low risk of default.

Still, it would benefit financial stability if more European companies were externally rated as ratings provide banks with additional information on borrowers and thus improve their risk management. Large corporates are supposed to have the financial means to pay for an external rating, but it can be expected that for reasons of commercial secrecy, they will continue to avoid giving financial market participants and direct competitors access to information about their financial health. Instead of obliging corporates to obtain the rating of a private agency, another solution would be to act via a public agency.

In the absence of a public European rating agency as such, national central banks should establish public rating registers for large EU corporates. The model they could build on in this regard is the Banque de France (BdF), that has its own rating system. The BdF is recognised as an external credit assessment institution (ECAI) but is exempted from registering as a credit rating agency with the European Securities and Markets Authority (ESMA). It has provided ratings to more than

260,000 French firms with a turnover exceeding €750,000. Since its ratings focus exclusively on the credit risk of non-financial companies, they are less expensive than a fully-fledged credit rating that must meet financial market purposes. The BdF's ratings are not made public but stored in the FIBEN public rating registry providing access only to banks, credit insurers and guaranty insurers. The costs of the ratings are borne by registry users.

Other central banks in the EU could follow the French example with no need to start from scratch. There are seven national central banks in the Eurosystem that have already set up an in-house credit assessment system (ICAS) to assess the quality of credit claims to non-financial corporations that commercial banks hand in as collateral for refinancing operations with them. But only the BdF is also recognised as an ECAI and its ratings can therefore be used by banks to determine the risk weight of exposures for calculating their capital requirements. Like the BdF, other central banks in the EU could apply for recognition as ECAIs and then provide corporates with ratings for prudential purposes.

However, if all national central banks started to rate domestic non-financial corporates, two safeguards should be introduced to ensure a level playing field in Europe. First, the different national registers would need to be interoperable so that banks from one EU member state can access the ratings of a company located in another member state. And second, the European Commission would need to revoke the BdF exemption and require all national central banks to register with ESMA to avoid unfair competition among EU member states.

As for the distribution of costs, banks should pay when using the ratings to cover the running costs of the registry, as in current French practice. However, since IRBA banks will gain the most from public registers and are due to benefit from a transitional treatment for unrated corporates with investment grade, it would be fair to make these alone pay into a fund for setting up public registers.

National central banks should not wait for the European co-legislators to adopt the final Basel III rules but start now working towards providing large corporates with an external credit rating. The European Commission, in turn, should establish minimum standards for the interoperability of public rating registers and define the modalities for central banks to register as external credit assessment institutions (ECAIs). Expanding the rating coverage of EU companies would enhance financial stability in Europe and the new output floor offers a good opportunity to do so.

Gefördert durch:

Bundesministerium der Finanzen

Friedrichstraße 194
D – 10117 Berlin
Tel.: +49 (0)30/259 219 107

Online: delorscentre.eu
E-Mail: info@delorscentre.eu
Twitter: @delorsberlin