ЛУЧШИЕ ИНТЕЛЛЕКТУАЛЬНЫЕ ИССЛЕДОВАНИЯ

BASEL IV: APPROACH FOR DETERMINING THE CAPITAL CHARGES

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The final design of the new Basel IV: Standardized Measurement Approach (SMA) is less conservative than proposed in the consultation paper—however, the impact on capital requirements will, for some banks, still be severe.

1.   Final approach
2.   Capital impacts
3.   Need for action
4.   Summary

The Basel Committee on Banking Supervision (BCBS) has finalized the Standardized Approach (SMA) for calculating the capital charges for operational risk.[1]Compared to the consultation paper, the approach has mainly stayed the same: the SMA consists of the two components Business Indicator Component (BIC) and Internal Loss Multiplier (ILM for short), which are multiplied by each other.[2]
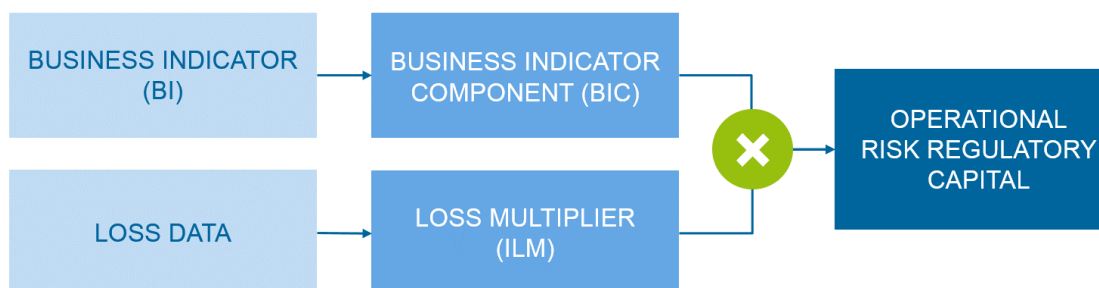

Figure 1: Calculation logic of SMA

Ad 1 Business Indicator Component (BIC)

Compared to the consultation, the number of buckets has been reduced from five to three. The thresholds from the lower and upper bucket have been adopted: the threshold from bucket 1 to bucket 2 remains (unchanged) at 1 billion euros. The threshold from bucket 2 to bucket 3 amounts to € 30 billion and thus equals the threshold between bucket 4 and bucket 5 in the consultation paper.

The weighting of the business indicator in the three buckets has been heavily adjusted. The weighting in bucket 1 has been increased from 11% to 12%. The

weighting in the higher buckets has been significantly reduced. Bucket 2 (for a business indicator between € 1 billion and € 30 billion) is weighted at 15%, bucket 3 (for a business indicator greater than € 30 billion) is weighted at 18% (see figure 2). In the consultation, a weighting of 29%, for example, was proposed for a business indicator greater than € 30 billion.
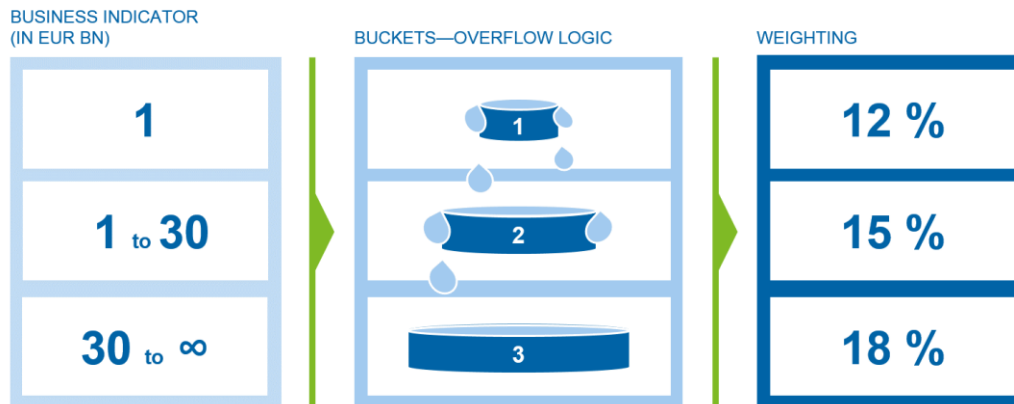
Figure 2: Bucket logic for calculating the business indicator component. Compared to the consultation, the number of buckets and weighting were adjusted.

Furthermore, the service component which is integrated into the business indicator component, has been simplified and the financial component slightly modified.

Ad 2 Internal loss multiplier (ILM)

Parameters of the loss multiplier were adjusted. In the final version, the loss multiplier is calculated as follows:

$$Loss\ multiplier = \ln\left\{\exp(1) - 1 + \left(\frac{15 \times \emptyset\ sum\ op.\ risk\ losses\ per\ year}{business\ indicator\ component}\right)^{0,8}\right\}$$

Figure 3: formula of the loss multiplier

As a result of the exponent 0.8 (in consultation 1), the above-average losses are weighted less in the loss multiplier (on the other hand, the reduction of capital requirements for banks with below-average total losses is also comparatively lower). In addition, the weighting of losses on the amount of losses is eliminated! I.e. all losses from past operational risk events are considered equal in the loss multiplier, regardless of the individual loss amount.

National discretions. The Basel Committee on Banking Supervision allows national implementation options in the design and application of the loss multiplier:

1.   On the one hand, it is left to the national legislator to also stipulate the application of the loss multiplier for bucket 1 banks (provided the banks meet the requirements for loss data collection).

2.   On the other hand, national legislators can suspend the use of the loss multiplier for all banks, so that even the capital requirements of larger banks with buckets 2 and 3 are only determined by using the business indicator component (BIC). However, the final paper clarifies that limiting the determination of the capital requirement to the business indicator alone does not exempt banks from disclosure requirements for accumulated loss data. Therefore, loss data from "larger" banks (with a business indicator greater than € 1 billion) must be collected, even if this data is not used to determine the loss multiplier.

Capital impacts

To assess the impact of the new SMA on capital requirements, the Basel Committee published the results of its Quantitative Impact Study simultaneously with the finalization of the new approach.[3] The analysis considered data from about 150 banks (thereof 28 G-SIBs) and simulated changes in minimum capital requirements by introducing the new OpRisk SMA. Differentiation was made between "large banks" (banks with Tier 1 capital > 3 billion EUR, which are internationally active) and "smaller banks" (all other banks). Among the large banks, the G-SIBs were again considered separately. The results are illustrated in the following figure:
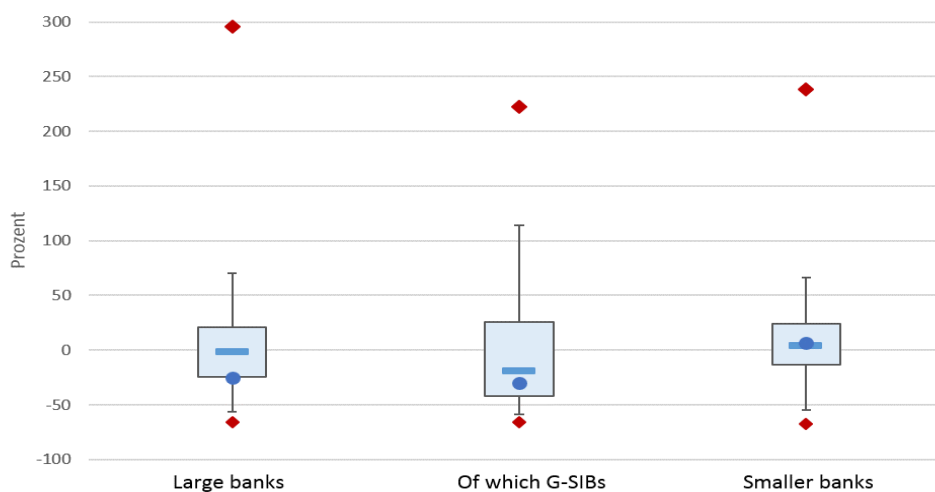

Figure 4: Box plot of the capital requirements impact by the SMA. The first and third quartiles mark the boundaries of the box, i.e. 50% of the observations are within

these limits. The antennae are limited by the 5th and 95th percentile, so that 90% of the observations are within the antennae. The blue line marks the median: 50% of the observations are below and 50% above this value. The weighted average is represented by the blue dot. Minimum and maximum are shown as red diamonds.

On average, the results of the BCBS show a moderate impact on capital requirements by the new SMA. The median capital impact is -3% for large banks and +0.6% for smaller banks. Hence, the capital requirements of about 50% of the banks will increase and decrease for the remaining 50%.

Removed from the median / mean analysis, figure 4 shows that the impact on capital requirements for the individual bank will in many cases be severe:

• The box in the box plot shows that the capital requirements of 50% of smaller banks may decrease by up to 15% and increase by up to 25% (-25% to + 20% for large banks). I.e. for half of the banks, the spread of the capital impact is already high.

• In order to make a statement about possible capital effects (the spread), which is valid for the majority of the banks, the range of the antennae in the box plot is to be considered. 90% (that is, the majority) of the banks are in the area spanned by the ends of the antennae. 90% of smaller and larger banks can therefore hope for a reduction of capital requirements of up to 50% or expect capital requirements to increase by up to 70% (G-SIBs may even expect an increase of up to 115%).

• In extreme cases, capital requirements will increase by 300% for large banks and 240% for smaller banks (see maximum values in figure 4). In individual cases, the capital effect can therefore be dramatic.