Basel 4: the way ahead

Operational Risk
The new Standardised Approach

Contents

01 Introduction

In December 2017, the Basel Committee on Banking Supervision (BCBS) released the final rules on operational risk capital. The final rules came a year later than anticipated and more than three years after the first consultation on operational risk in October 2014.

The BCBS has introduced a single non-model based method for the calculation of operational risk (OpRisk) capital, the Standardised Approach (SA). This will replace all three existing approaches for OpRisk under Pillar 1: the Basic Indicator Approach (BIA), the (Alternative) Standardised Approach (TSA/ASA) and the Advanced Measurement Approach (AMA). The SA will apply from 1 January 2022.

The main objectives of the BCBS in defining these new rules were to improve comparability and simplicity, but neither has been fully achieved. The scope for national discretion and the use of opaque Pillar 2 capital requirements will make it difficult to compare banks, while the new SA is less simple for banks that currently use the less advanced approaches to OpRisk because of the ten year loss data capture requirement. There is also a risk that the new SA will reduce the incentives for robust risk management within the business due to the lack of risk sensitivity in the new approach.

KPMG

02 Reduced risk management incentive

"

Currently, banks can choose the approach to take for calculating OpRisk capital, with the possibility of capital savings in return for higher investments in risk management.

"

Currently, banks can choose the approach to take for calculating OpRisk capital, with the possibility of capital savings in return for higher investments in risk management. While the internal loss multiplier provides some risk sensitivity (unless national supervisors exercise the discretion to take this out of the calculation) it does not include important factors such as the strength of a bank's control environment, potential significant loss scenarios, or external influences.

The new SA is much simpler than the current AMA and as a result is no longer as risk-sensitive. This is likely to reduce the incentive for banks to strengthen their operational risk management.

This reduced incentive could hold back investments in improving operational risk management and shift the focus to cost control by cutting back operational risk processes and teams. This could also mean that banks no longer invest sufficiently in mitigating against future losses, such as from breaches in cyber security.

However, it is likely that banks will continue to be required by national supervisors to maintain and even to strengthen robust risk management procedures, with capital add-ons being applied for failings in this area, for example through the SREP framework. Supervisors will also continue to focus on operational risk improvements through operational resilience – ensuring that critical functions of banks can continue to operate through periods of recovery or stress, and even into resolution – and through the management of conduct and cyber risks.

It is therefore critical that banks maintain high quality OpRisk teams, continue key processes such as scenario analysis and modelling risks to assist with business decision making, and embed operational risk management mindsets into the business.

KPMG Public

KPMG

03 Implications for banks

(i) Data, systems and processes

- With the exception of loss data collection (LDC), the new BCBS standards do not discuss qualitative requirements for OpRisk management. This does not mean that other components of the current OpRisk management framework are no longer relevant, but those requirements are stated elsewhere (in particular in documents dealing with Pillar 2 issues and within the BCBS's 'Principles for the Sound Management of Operational Risk').

- Banks currently using the AMA, and some other banks, may already have in place the data, systems and processes to meet the new standards on LDC, since they are similar to what is currently required under AMA or as part of local Pillar 2 requirements. But other banks may have to invest in new data, systems and processes.

- Banks required to calculate the internal loss multiplier (ILM) will have to ensure that their internal LDC processes are sufficiently robust and cover the required ten-year history. The materiality threshold for LDC has been set at €20,000. These LDC requirements are more detailed and onerous than currently required for BIA or TSA/ASA banks, including expectations of formal internal challenge by a bank's validation units and internal audit functions. As a consequence, banks that have not yet established sound LDC processes will need to put these in place soon so that they can meet the implementation date of January 2022.

- Banks will also need to invest in training and incentive schemes for individuals involved in LDC, in data quality processes (automated or semi-automated reconciliations, sign-offs etc.) and in documentation to ensure that LDC is of a sufficiently high quality.

- Many banks may scrutinise their loss data in order to apply for the exclusion of certain operational loss events "no longer relevant" to their risk profile, thereby achieving some capital reduction.

- Risk management teams will need to work together with finance to define exactly how the components of the business indicator are derived from the profit and loss accounts.

- Risk mitigation should also be given priority, as reducing losses will also lead to reductions in the ILM. However, due to the lengths of the loss data history, those benefits will not materialise in the short term.

- With the removal of AMA as the benchmark for defining OpRisk management frameworks, banks should exploit this opportunity to re design or fine-tune their OpRisk management framework, including scenario analysis and risk assessment processes, to address risk features such as causes, interconnections, and velocity. This can deliver an OpRisk map that is more understandable and actionable by the business for managing operational risks.

- Banks should use the freedom of Pillar 2 models (without the link to a Pillar 1 AMA model regulatory requirement) to focus on models that support decision-making and the running of the business. This could encompass advanced non-financial risk analytics such as causative and machine learning models (such as Neural Networks or Bayesian Networks). KPMG member firms have already observed banks making changes in this area.

(ii) Business model

- The definition of the business indicator components (as compared to gross income currently used for calculating the more simple Pillar 1 approaches) generates higher capital requirements for some business activities, for example due to the removal of netting rules for profit and loss positions. Banks should analyse their different business lines to ensure they remain sustainable in all aspects (including profitability, capital usage, customer expectations, etc).

- Due to the bucketing of the business indicator, larger banks will face much higher capital charges compared to smaller ones, which might have an influence on strategic decisions (especially non-organic growth through merger and acquisition activities).

(iii) Capital

- KPMG experts anticipate a high level of variability in capital impact across banks and across jurisdictions under the new SA. There will be contrasting impacts between smaller banks and larger banks, as well as between banks currently adopting BIA or TSA/ASA compared to those adopting AMA. Meanwhile, the scope for national discretion by supervisors may lead to significant differences in impacts across countries.

- While a BCBS quantitative impact study shows significant decreases in OpRisk capital requirements on average for the largest banks globally, and a small increase for smaller banks, in the EU it is expected that banks will have a significant increase in OpRisk capital requirements, with an EBA analysis predicting a 20-30 percent increase (see box 04 EBA analysis on page 6).

- Although the SA is not in force until 2022, all banks should ensure they are incorporating the future SA into their capital planning process as well as in risk adjusted return measures at an early stage.

- Irrespective of the changes to Pillar 1 OpRisk capital requirements, many banks will continue to be required by their supervisors to use a model-based approach for assessing their economic capital and their Pillar 2 capital requirements. This is unlikely to change under the new regime.

- The use of national discretions and Pillar 2 capital requirements is likely to make it difficult to compare OpRisk capital requirements across different banks.

04 EBA analysis

Analysis published by the EBA in December 2017, shows a 28.5 percent increase (on average) in OpRisk capital requirements for EU banks moving from AMA to the new SA.

However, these estimates do not include either the ILM component (the multiplier is set at one in the EBA analysis) or any potential changes to Pillar 2 capital requirements. The impact of the SA on current BIA or TSA/ASA users is expected to be somewhat lower, with the EBA estimating a 21 percent increase in OpRisk capital requirements for these banks. Some smaller banks adopting BIA or TSA/ASA might benefit from some capital relief.

Irrespective of the Pillar 1 approach currently used, the EBA analysis shows that the increase for smaller banks is roughly one third smaller than for larger banks.

05 BCBS analysis

The BCBS has also published a quantitative impact study in December 2017, showing that globally, the SA generates on average a 25 percent decrease in OpRisk capital requirements for the largest banks (and a 30 percent decrease for G-SIBs), but a 7 percent increase for medium-sized banks.

The difference between these results and the EBA analysis is largely driven by the inclusion of US and Asian banking groups in the BCBS study.

"
Analysis published by the EBA shows a 28.5 percent increase (on average) in OpRisk capital requirements for EU banks moving from AMA to the new SA.
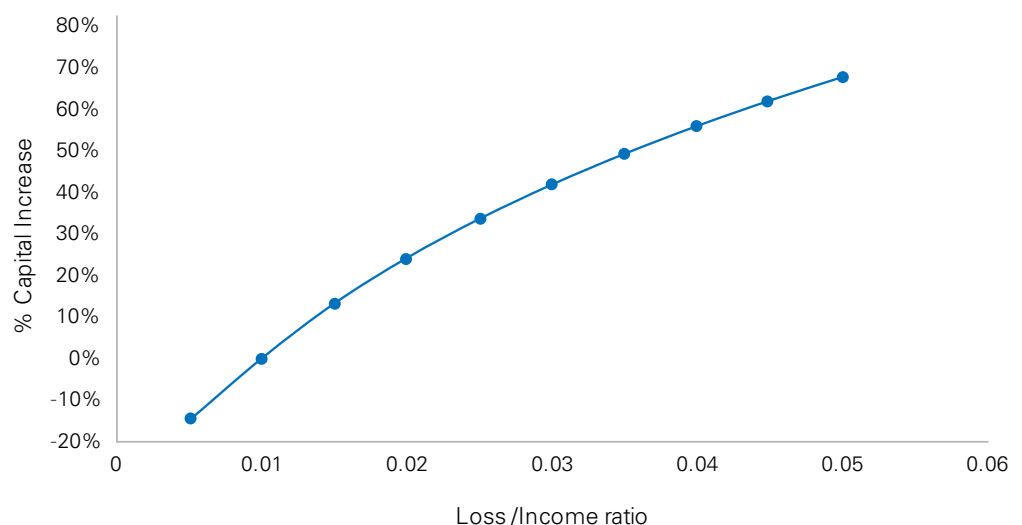"

06 KPMG Peer Bank analysis

Using data sourced from the EBA transparency exercise, the KPMG "Peer Bank" tool and an internally developed Business Indicator calculator, KPMG member firm specialists have performed a sensitivity analysis of capital impact under different scenarios.

The scenarios are defined by varying the value of a generally accepted metric of the materiality of operational loss, namely the ratio of annual operational risk losses to income (loss/income ratio)[1]. Measures of this kind are also often included among risk appetite indicators for operational risk and are used by regulators as part of the SREP to judge the risk profile of a bank.

Analysis based on a representative sample of 75 large European banks[2], shows that the estimated impact on capital is positive (capital reduction) or zero if all the banks in the system have a low loss profile (as compared to income) – a loss ratio of up to 1 percent. However, the capital impact becomes increasingly adverse as the loss ratio increases (see chart), with OpRisk capital increases of up to 25 percent when the loss ratio is between 1 and 2 percent, and around 40 percent when the loss ratio reaches 3 percent, which is a threshold generally characterising quite risky banks.

These findings are averages[3] across the sector and caution should be applied when extrapolating results to the individual bank level, due to the already noted variability of impacts across banks.

OpRisk capital impact of the loss ratio

1. Annual operational risk losses/ (total operating income – net other operating income). The denominator is computed as a three-year average.
2. This includes most banks directly supervised by the ECB and major UK banks.
3. Percentage capital increases are weighted by initial operational risk capital requirements.

07 The detail

The SA consists of two main components – a Business Indicator Component (BIC) (a measure of a bank's income) and a Loss Component (LC), from which an Internal Loss Multiplier (ILM) is derived (a measure of a bank's historical losses). The minimum (Pillar 1) operational risk capital requirement is the product of the BIC and the ILM, with risk-weighted assets for operational risk being this capital requirement multiplied by 12.5.

Business Indicator Component (BIC)

The Business Indicator (BI) is the sum of the interest, leases and dividend component (ILDC), the services component (SC), and the financial component (FC), which are defined as:[4]

- ILDC = Minimum (**Absolute Value [Interest income – Interest expense]**; 2.25% *Interest earning assets) + **Dividend income**

- SC = Maximum (**Fee income; Fee expense**) + Maximum (**Other operating income; Other operating expense**)

- FC = **Absolute value (Net P&L Trading book)** + **Absolute value (Net P&L Banking book)**
(The values highlighted in bold are calculated as the average over the past three years)

To calculate the BIC, the BI is allocated to three buckets and the marginal coefficient applied, as shown in the table below. The marginal coefficient is applied on increasing portions of the BI. This approach resembles common tax formulas with progression schemes. For example, a BI of €35 billion will have a BIC of €5.37 billion ((1*12%)+(30-1)*15%+(35-30)*18%).

Bucket	BI range (in € billions)	BI marginal coefficient
1	≤1	12%
2	1 <BI ≤30	15%
3	>30	18%

4. The final standards introduce several changes from the earlier consultation papers. See box on page 10 for a comparison with the March 2016 consultation paper.

Loss Component (LC)

The LC is defined as 15 times the average annual operational risk losses over the previous 10 years (with a minimum of five years during the transition to the SA). This component introduces some risk sensitivity into the approach.

The Internal Loss Multiplier (ILM) is calculated from the LC and BIC by the following formula:

$$ILM = Ln\left(\exp(1) - 1 + \left(\frac{\text{Loss Component}}{\text{BI Component}}\right)^{0,8}\right)$$

For example, a doubling of LC (when it equals the BIC) results in an increase of ILM of around 24 percent.

The minimum value of the ILM is 0.541 (rounded) when the LC=0, and the ILM equals 1 when the LC equals the BIC. As the LC increases the ILM increases at a slower rate (with a constant BIC), for example a doubling of LC results in an increase of ILM of around 24 percent.

There is a lot of scope for national supervisor discretion, in particular around the ILM. This includes:

a. Whether the ILM is required by banks in that jurisdiction: national supervisors can set this to one for all banks in their jurisdiction (although banks would still be subject to the full set of Pillar 3 disclosure requirements).

b. Whether banks in bucket one of the BI are allowed to use the ILM: banks whose total BI is within the first bucket are generally exempt from applying the ILM. However, at national discretion supervisors may allow the inclusion of internal loss data into the calculation for these banks, subject to these banks meeting specified loss data collection requirements.

c. Whether and to what extent banks are allowed to remove individual loss data points from the calculation set for the ILM where a bank believes the loss events are no longer relevant to its risk profile.

d. The approach banks adopt when they do not have at least five years of high-quality loss data.

e. What the minimum threshold is for including a loss event in the data collection and in the calculation of average annual losses – this could be increased to €100,000 from €20,000 for banks in buckets two and three at national discretion.

08 How KPMG can help

KPMG member firms have established teams of specialists able to support banks across a wide range of non-financial risks.

KPMG professionals can assist banks with the introduction of the OpRisk SA by:

- Advising on the structure of their OpRisk management function and OpRisk models to improve decision-making and the integration of various components of the non-financial risk spectrum.

- Reviewing OpRisk frameworks to incorporate the new requirements while helping to ensure they remain fit for purpose for current regulatory requirements.

- Conducting test calculations of the SA and assessing the impact on capital planning, risk-adjusted performance measures, etc.

- Refining loss-data collection standards and processes to meet the requirements for usage in the ILM.

- Developing risk assessment methodologies that are designed to support empowered management (as opposed to measurement) goals, through tools such as KPMG's Dynamic Risk Assessment (DRA).

09 Comparing final standards with earlier consultation

Major changes between Standardised Measurement Approach (BCBS consultation paper dated March 2016) and final rule (new Standardised Approach dated December 2017)

	SMA (Consultative Document, March 2016)	SA (Final BCBS standards, December 2017)
Business Indicator Definition	ILDC = Min(Abs(Interest income – Interest expense); 3.5% * Interest earning assets) + Abs(Leasing income – Leasing expense) + Dividend income	ILDC = Min(Abs(Interest income – Interest expense); 2.25% * Interest earning assets) + Dividend income
Business Indicator Buckets	5 buckets (<€1bn, €1-3 bn, €3-10 bn, €10-30 bn, >€30 bn)	3 buckets (<€1 bn, €1-30 bn, >€30 bn)
Business Indicator Multipliers	11%, 15%, 19%, 23%, 29%	12%, 15%, 18%
Loss component de minimis	€10,000	€20,000
Loss component buckets	3 buckets (<€10 m, €10-100 m, >€100 m)	1 bucket
Loss component multipliers	7, 14, 19	15
Exponent (LC/BIC)	1	0.8
ILM applied to	Buckets 2-5 only	All buckets (if total BI>€1 bn)
Loss definition	Banks must not use losses net of insurance recoveries as an input for the SMA loss data set	Banks should use losses net of recoveries (including insurance recoveries) in the loss dataset

Contact us

Clive Briault
Senior Advisor
EMA FS Risk & Regulatory Insight Centre
E: clive.briault@kpmg.co.uk

Andrea Colombo
Associate Partner, Financial Risk Management
KPMG in Italy
E: andreacolombo@kpmg.it

Fiona Fry
Partner and Head of EMA FS Risk &
Regulatory Insight Centre
E: fiona.fry@kpmg.co.uk

Fabiano Gobbo
Partner and Global Lead,
Financial Risk Management
E: fgobbo@kpmg.it

Thomas Kaiser
Director, Financial Services
KPMG in Germany
E: thomaskaiser@kpmg.com

Daniel Quinten
Partner and Co-Head KPMG's ECB Office
EMA Region
E: dquinten@kpmg.com

Heather Townson
Senior Manager, Financial Risk Management
KPMG in the UK
E: heather.townson@kpmg.co.uk

kpmg.com

KPMG Public