

**Position Paper in response to
BCBS consultation on the
Standardised Measurement
Approach for operational risk**

June 2016

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Foreword

ABI and DIPO (Italian Database on Operational Risk Losses) welcome the opportunity to comment on the Basel Committee on Banking Supervision consultative document on the Standardised Measurement Approach for operational risk.

This Position Paper is based on comments received from their members.

General comments are provided below. In addition, there are also some specific comments related to individual paragraphs.

The answers to questions 1 to 3 can be found at the end of the document.

The Question 3 section concerns an empirical study based on data collected from a representative sample of ABI members.

For the ABI sample of 18 intermediaries (2013-2015), the SMA is not capital neutral in comparison to current regulatory approved capital: all the intermediaries in Buckets 2-5 and more than 25% of those in Bucket 1 would see an increase in capital.

For Buckets 2-5, the median is a capital increase of 46% and a quarter of entities would see an increase of 72% or more.

In addition to comments on the Alternative method in Annex 2 of the consultative document, three different SMA revised formulas were tested, under the assumption of minimizing the sum of the squared differences from historical capital requirements.

Appendices 1 and 2 focus on specific aspects of SMA transparency and sensitivity and Business Indicator (BI) Component representativeness of operational risks.

General Comments

1) AMA pluses

We welcome the opportunity to express our view on the Basel Committee consultation paper on the Standardised Measurement Approach (SMA) for Operational Risk and support the attempt to reduce the discrepancies introduced between AMA banks and between AMA and non-AMA banks.

In general, we are critical of the adoption of Standardised Approaches for operational risk due to the fact that the **"one size fits all"** solution does not properly capture structural differences in jurisdictions (Europe or Asia vs. US) or in business mix (high profile investment banking – e.g. industrial packaging of CDOs – vs. plain vanilla commercial banking business). In particular, the Business Indicator to be calculated in order to determine the BI Component of the SMA methodology is not deemed to be risk sensitive and is proven to be strongly correlated to the Gross Income previously adopted.

As far as the Loss Component is concerned, further clarifications on rules and definitions and precise criteria to be adopted across jurisdictions should be provided (e.g. definition of incurred loss, same reference date, clear treatment of root events, inclusion or exclusion of loss data accounted by subsidiaries no more in Group perimeter).

Although simplified, AMA should be kept in order to preserve most of the investments already made by the banks to develop their own ORM framework; the effective achievement of this goal requires greater involvement of the banking industry in the review process.

We believe that some features of AMA should be preserved in the new SMA, helping in assigning capital efficiently according to the loss history and the evolution of the risk management of each institution (ICAAP and Stress Testing), keeping the right incentives within institutions to actively manage operational risk, and helping in identifying future potential sources of risk.

Following the international criteria, an institution's operational risk measurement system **should include the use of internal data, external data, scenario analysis and factors reflecting the business environment and internal control systems.**

In this consultative document, however, only one element is considered sufficient to provide a risk-sensitive measure of operational risk. In our view, other sources of information are needed, particularly **any mitigation plans whose omission could determine a measure of risk far from the real potential exposure of the Bank.** After a bank has suffered a series of losses, it mitigates the main factors that caused them, and therefore the use of only past experience to set the standard measurement approach could be misleading.

In order to maintain the identification, measurement and control systems for operational risks already implemented by the banks, which have allowed a

gradual mitigation of operational risk in recent years, as an alternative to slightly simplified AMA, it is suggested to consider **alternative stochastic approaches** rather than reintroduce no-risk-based approaches.

2) Risk Sensitivity

The absence in the SMA calculation of **scenario analysis** and **mitigation plans** could determine a measure of risk far from underestimating the real potential exposition of the Bank's level of operational risk and in addition would not provide any incentive to give any evidence of the mitigation investments on mitigation policies and processes.

The loss experience of a bank is strictly correlated to the environment in which the loss occurred. After the bank suffered a series of losses, the company mitigates the main factors that caused the losses. For this reason, **the use of only past experience to set the standard measurement approach could be misleading**. The bank-specific loss data have been introduced in the formula in order to enhance the risk sensitivity of the previous standardized approach. However, we have observed that if calibrated in this way, the SMA does not achieve this goal because **the weight of the business component is disproportionately higher than the 'risk-sensitive adjustment', frustrating the aim of having a capital absorption which is fairly fitted to bank's idiosyncratic risk profile**. Namely, being a more standardized number, it is more comparable across banks because it is computed in the same way, but being actually unreflective of the level of op risk of a bank, as aforementioned, it de facto simplifies the comparison among meaningless numbers.

One implementation to be considered on this topic could be the use of a different combination between BI and LC, where the percent weight assigned to the LC component is related to the qualitative standards of the operational risk framework adopted. For example, the SMA could consider at the **beginning a higher level of contribution LC for the banks who already adopt the advanced methods**. At a later time after the entry into force of the SMA, the percentage LC used by the single bank would be provided on the basis of the result of an annual scoring system on the quality of the ORM framework, where the score would be assigned by the Regulator (i.e. for the SSM Regulation the BCE Joint Supervisory Team). The level of percentage LC proposed is discussed below.

On the other hand, a solution could be to include and manage some multipliers of the SMA formula elements (see section Q3.2 below).

3) Enhancing transparency and level playing field

Theoretical and **empirical justification for the new method is not disclosed** to understand how scaling coefficients of LC and scaling factors used in the BI formula are supported (see relative [Appendix 1](#) "SMA Transparency and Sensitivity").

The removal of all methods currently in use by a single "one size fits all" approach based on a Business Indicator (BI) corrected for Internal Loss

Multiplier defined on the basis of historical operational losses (Loss Component, LC) would be significantly impacted by LDC data set recorded internally by each bank.

The new method would suffer from a significant arbitrary component which makes it difficult to compare the risk-based capital measures.

As far as banking Groups are concerned, the marginal coefficient applied to the business component is calculated at consolidated level and then used for all the group legal entities regardless of their size.

Hence, banks in federative Groups will be penalized, since the Group marginal coefficient to be applied to the Business Component is higher by construction than the individual one. This allows, on individual level, a capital requirement lower than the contribution of each LE on consolidated level.

This approach is more penalizing for the smallest banks (with Business Indicator lower than 1 €/bn) than for their biggest counterparts, while it is more punitive for small banks which are part of a group than for individual banks:

- on individual level, the BI of smaller banks is not corrected by the loss component, but on consolidated level they take charge of losses experienced by the Group;
- on individual level, an implicit beta lower than that of the Group is applied.

In order to come up with an **easily comparable measure**, the SMA is calibrated without taking into account the high variability of operational losses in banks' portfolios, since the dispersion both between banks and between jurisdictions in terms of loss experience is high. It **indeed apparently creates a level playing field because numbers are computed in the same way, but it de facto smoothes any difference across banks, negatively impacting the most virtuous credit institutions in favour of those which historically have had a higher risk profile**, linked to high losses incurred by some banks for the previous year's litigation (e.g. Libor scandal, subprime mortgages, sanctions for violations of international regulations, and other misconduct).

4) SMA and Pillar 2

Internal models were widely used and play an important role in the institution risk-management system, its decision-making processes and its capital assessment and allocation processes. **The new framework will challenge the maintenance of a sound risk management and use test**, since the strengths of developed internal models from a managerial point of view will be discarded.

For instance, SMA gives no incentives to control the risk profile through mitigation actions, since the forward-looking component is not considered and each operational loss will have a direct impact on the capital requirement for 10 years in addition to the scarce loss component risk sensitivity. It should

be mentioned that there are not any references on the role of Pillar 2 in the BCBS consultation paper on the SMA. In any case, **if the Pillar 2 capital requirements are floored by those of Pillar 1, the proposed SMA calibration will make Pillar 2 ineffective. It is hard to expect significant investments on Pillar 2 internal models without any possible impact on CET1 ratio.**

Finally, the new framework does not consider any positive effect due to risk transfer by insurance. The removal of internal models will undoubtedly damage the management and measurement of operational risk, with potentially dramatic consequences for the industry.

The importance of maintaining the application of advanced approaches among the risks assessed under Pillar II should be stressed, given the significance attributed to operational risk category under the SREP process.

Specific comments

Application of the Internal Loss Multiplier to the 1st BI bucket banks

By ignoring the internal loss multiplier for banks with BI below 1 bn EUR the proposed approach assumes that they do not have high quality data on historical operational risk losses which is not true in many cases. There are small banks that have good quality operational loss databases. As a result, we believe the internal loss multiplier should be accounted for always when a bank can prove adequate quality of its loss data. This would also make SMA more risk sensitive for smaller banks where the current calibration does not assure that properly.

References to RTS AMA

It would be appropriate that the new document would provide information on some qualitative and quantitative requirements that are included in the "Final Draft Regulatory Standards on the specification of the assessment methodology under which competent authorities permit institutions to use Advanced Measurement Approach (AMA)", which are not mentioned in the Consultative Document. In particular:

- Scope of the operational risk (e.g. Legal Risk (see art. 4 RTS "on AMA"); Model Risk (see art. 5 RTS "on AMA"); operational risk losses related to Market Risk (see art. 6 RTS "on AMA"); operational risk losses related to Credit Risk (see art. 30 RTS "on AMA")
- Governance structure (see art. 7 RTS "on AMA")
- Risk Tolerance (see art. 8 RTS "on AMA")
- Organizational Model (see art. 9 - 10 RTS "on AMA")
- Use Test (see art. 12 - 16 RTS "on AMA")
- Reporting (see art. 11 RTS "on AMA")
- Data Quality (see art. 22 RTS "on AMA")
- IT Infrastructure (see art. 23 RTS "on AMA")
- Audit and Internal Validation (see art. 18 - 20 RTS "on AMA")
- Scope of operational risk loss (see art. 28 RTS "on AMA"). In particular, it is suggested a further specification whether the following types of operational losses should still be detected: Uncollected Revenues, Near Misses, Operational risk gains, opportunity cost, internal costs such as overtime or bonuses)
- External Data Article (see art. 31 RTS "on AMA")
- Scenario Analysis Article (see art. 32 RTS "on AMA")
- Business Environment and Internal Control Factors Article (see art. 33 RTS "on AMA")
- Insurance and Other Risk Transfer Mechanisms (see art 42. - 50 RTS "on AMA")

It would be appropriate that the new document would provide information on the following aspects:

- Calculation criteria if the Business Indicator is unavailable for some observations during the reporting period. Further clarifications are requested whether the capital requirement should be calculated taking into consideration the average of the available observations or it should include also the null values (e.g. If $BI_{t-2} = N/A$; $BI_{t-1} = 3$; $BI_t = 1$, it is not clear whether the BI Component = $4/3 = 1,3$ or BI Component = $4/2 = 2$)
- Calculation criteria if the Business Indicator (or some of its components) refers to time horizons less than 12 months (e.g. In case of new-born banks, M&A)
- Calculation criteria in case of business acquisition/disposal (it is not clear whether the SMA capital should consider information related to disposed business or not, etc.).

Finally, it would be appropriate to specify the deadline for the AMA regulations defined in the Commission Delegated Regulation EU n° 942/2015 of 4 March 2015 and Commission Delegated Regulation EU n° 529/2014 of 12 March 2014 of the European Parliament and of the Council with regard to regulatory technical standards for assessing the materiality of extensions and changes of the Internal Ratings Based Approach and the Advanced Measurement Approach.

What do you mean by 'linear normalisation ratio' (see pag.4)? Does this operation correspond to the second member inserted in the square brackets of the third bullet of page 5? Otherwise, could you please provide an example with dummy data?

Inclusion of insurance mitigants

The insurance industry provides banks with efficient cover against large **unexpected operational risks**. Insurance performs a crucial function within the financial system, ensuring material risks are transferred and diversified efficiently across the industry, contributing to system resilience.

Maintaining insurance as a recognized Pillar 1 capital mitigant in the new regulatory framework is a sound way to ensure risk-sensitivity is enhanced and promote good behaviour.

Since the business indicator component of the proposed SMA formula is supposed to be calibrated on a variant of the OpCaR model¹, it may be possible to use this model to quantify the insurance benefit and integrate it within the SMA formula.

We propose to include insurance in the standardized measurement approach by incorporating a new optional insurance component. This will be incorporated as follows, as an ex-post percentage correction:

$$SMA\ Capital_{net} = SMA\ Capital \times (1 - Insurance\ Component)$$

¹ The original OpCaR model is described in the consultative paper "Operational risk – Revisions to the simpler approaches".

The insurance component denotes the percentage of capital that can be off-set by implementing an eligible insurance policy. It is calculated using a cap of 20%:

$$\text{Insurance component} = \min(20\%, \delta)$$

The δ parameter could be calibrated considering an “admissible insurance contract” which could be more standardized, with features similar to the following:

- Material risk retention;
- Disclosure requirements to the insurance market and regulator;
- Insurance counterparties must have a minimum credit rating of “A” or equivalent;
- Claims protocol to facilitate timeliness of payment within the insurance contract;
- Clarity of coverage:
 - Based on traditional insurance solutions enhanced to provide clarity of cover and payment certainty
 - Clear contract wording with a coverage clause considering all Operational Risk above a threshold arising out of any Operational Risk events subject to a pre-agreed set of exclusions:
 - Credit/Market/Strategic/Reputational risk events
 - Deliberate corporate acts
 - Regulatory fines and penalties
 - Known prior acts
 - Claims arising out of liquidation/bankruptcy/insolvency/schemes of arrangement
 - Seepage, pollution or contamination
 - War/Nuclear

The important factors to consider for computing the insurance benefit are the policy limit L , deductible D , and a standard haircut H covering the theoretical impact of the limit on capital, any mismatch in cover, counterparty default or delay in payment:

$$\delta = \frac{H \cdot L}{SMA\ Capital} \cdot f(D)$$

$f(D)$ is an adjustment depending on the chosen deductible, ensuring the benefit decreases as the deductible increases.

The haircut H can be calculated by the Basel Committee with the QIS data as part of the SMA final calibration.

Minimum Standard for use SMA

According to Article 312 of the Regulation (EU) No 575/2013 "To qualify for use of the Standardised Approach, institutions shall meet the criteria set out in Article 320, in addition to meeting the general risk management standards set out in Articles 74 and 85 of Directive 2013/36/EU....".

We did not find in the document any reference to general criteria of sound practices for management of operational risk like those described in the Basel publication "Review of the Principles for the Sound Management of Operational Risk" 6 October 2014.

The absence, in this consultative document, of guidelines on the management of operational risk could be misleading for the banks that started or are going to start a project to implement a strong operational risk management process.

Q.1 What are respondents' views on the revised structure and definition of the BI?

1. **Some P&L items could include extraordinary income and extraordinary expenses** coming from business disposals and/or other organizational interventions aiming at reducing the bank's risk profile (eg. Net Profit/Loss on financial Operations -Trading and Banking Book-, Other Operating Income, Other Operating Expenses, etc). This condition would lead to an increase of the regulatory capital, which could be a disincentive and produce incoherent effect with respect to the risk profile trend. Moreover, no instructions are provided for the treatment of extraordinary and/or irregular items.

It is suggested to:

- ✓ **Link the definitions of BI components to IAS (International Accounting Standards) and IFRS (International Financial Reporting Std)** so that all jurisdictions have the same references.
- ✓ **Define objective criteria** for the identification of extraordinary and/or irregular items stemming from organizational interventions aiming at reducing the bank's risk profile in order to reduce the effect on the regulatory capital calculation.
- ✓ Indicate whether banks should refer to the **"Normalized" balance-sheet or to the standard balance-sheet** for the Business Indicator calculation.

2. The representation of risk exposure is also influenced by the **provisions**.

In principle, provisions and capital requirements are well distinct reserves banks have to absorb losses: the expected portion of them is dealt with under appropriate provisioning practices, while only the risk of incurring in unexpected losses is mitigated through regulatory capital.

However, in the SMA approach the level of provisions is computed for calculating capital requirements. While theoretically the level of suffered losses could be an indication of the unexpected losses a bank might incur in, provisions should be deducted in bank's modelling for operational risk, being a representation of expected losses. In the AMA models provisions are taken into account, however then deducted from the capital charge measurement, not to distort final outcome.

Moreover, this approach penalizes relatively more the banks which have more conservative provisioning.

It is worth to mention that there is no uniform provision treatment among jurisdictions, furtherly challenging the comparability of measures.

The application of an ex-post deduction of the total amount of provision, representing expected losses, could lead to a better representation of the risk exposure since capital should cover the unexpected losses.

We propose to deduct all the available provisions booked over the considered time window.

In addition, the treatment is even more unwarranted since provisions accounted for the in the P&L against operational loss events are **double counted both in the BI and loss component formulas, unduly increasing the overall capital charge:**

- Business Indicator²: provisions are included in the Services component (Other Operating Expenses). The impact of the exclusion is limited, since mitigated by the maximum between Other Operating Income and Expenses.
- Loss Component: provisions accounted in the time window are explicitly included in the SMA loss dataset.

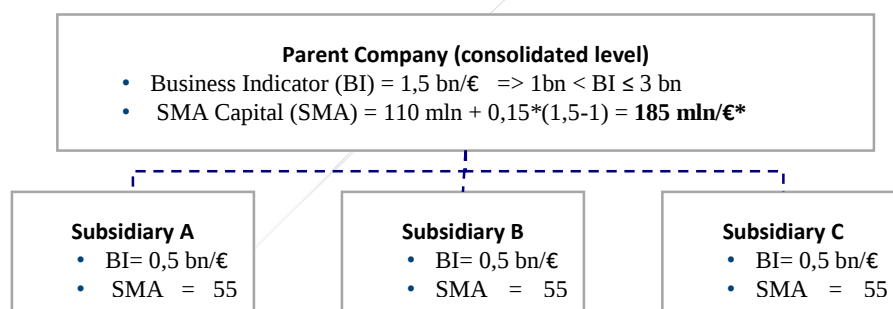
It is suggested to exclude from the BI Component both **provisions for operational risk events** and **asset maintenance expenses** and to allow the **deduction of the provisions for operational risk events** that are included in the Loss Component.

3. Under the methodology proposed by the Committee, negative and positive balance-sheet items are assigned the same weights. This approach determines same levels of capital requirements for banks with opposite levels of profitability (**banks with negative profitability components should be most affected by increase in regulatory capital**).

It is suggested to diversify the weights for positive and negative items.

4. It is noticed a possible inconsistency between art 4 in chapter 1 of the Consultative Document ("the proposed SMA framework would be applied to internationally active banks on a consolidated basis") and what is stated in art 37-39 in chapter 5 of the same paper. If the SMA framework should be applied also on a sub-consolidated basis, consolidated and sub-consolidated SMA Capital calculations seem inconsistent. The following diagram reports what is mentioned above:

² See also Appendix 2 "Why cannot Business Indicator be considered as a good proxy for Operational Risk exposure?"



(*) For sake of simplicity it is assumed that the internal Loss Multiplier = 1

As can be seen in the diagram, the sum of the sub-consolidated regulatory capitals (165 mln/€) is lower than the consolidated regulatory capital (185 mln/€), caused by different regulatory coefficients applied on the buckets. The capital gap existing between the consolidated level and the sub-consolidated one is further magnified since subsidiaries placed in bucket 1 do not adopt the Loss Component for the SMA Capital calculation.

If the sum of the subsidiaries capital requirements is lower than the consolidated one, the banking group will have to define a specific allocation mechanism to allocate the "residual" (i.e. difference between group and sum among subsidiaries) capital requirement. The request for defining a specific allocation mechanism is in contradiction with the definition of a standardized approach. Moreover, the definition of the specific allocation mechanism could introduce some issues, especially when the subsidiary is regulated by different authorities than the one controlling the consolidating entity.

The following alternative solutions are suggested:

- a) To approach this inconsistency, a deduction on consolidated level on the basis of a diversification effect up to 18% can be applied, as losses do not occur at the same time in every legal entity. The diversification can be based as the difference between the coefficient of the Group bucket and the median coefficient of the subsidiaries buckets.
- b) In order to limit the discrepancies between individual and consolidated view for legal entities in a group, **a linear relationship between Business Indicator and SMA capital can be considered**. If the size-based buckets have to be still considered, an almost linear relationship can be set up, reducing the differences among the coefficients of different buckets.
- c) **specialized institutions** should benefit from their lower and simpler structure and that such benefit should be maintained also at consolidated level, as those companies should be in the position to have a good control of their operational losses. In order to achieve this result, the SMA calculation should follow a "bottom up" approach

instead of a "top down" approach, so that the total requirement will be the sum of the individual requirements.

5. In order to increase risk sensitivity, we suggest a more **granular approach** that would allow to better distinguish banks based on their level of BI and historical losses.

- in the BI component, further thresholds of 20 €/bn and 50 €/bn should be added to the current structure;
- in the loss component, anticipating other proposals in paragraph Q2, in addition to the three existing addends, the Average Total Annual Loss only including loss events above 1 €/mn and 1 €/bn are envisaged.

Buckets		
BI (€'000)		Coefficient
-	1,000,000	β_1
1,000,000	3,000,000	β_2
3,000,000	10,000,000	β_3
10,000,000	20,000,000	β_4
20,000,000	30,000,000	β_5
30,000,000	50,000,000	β_6
50,000,000	-	β_7

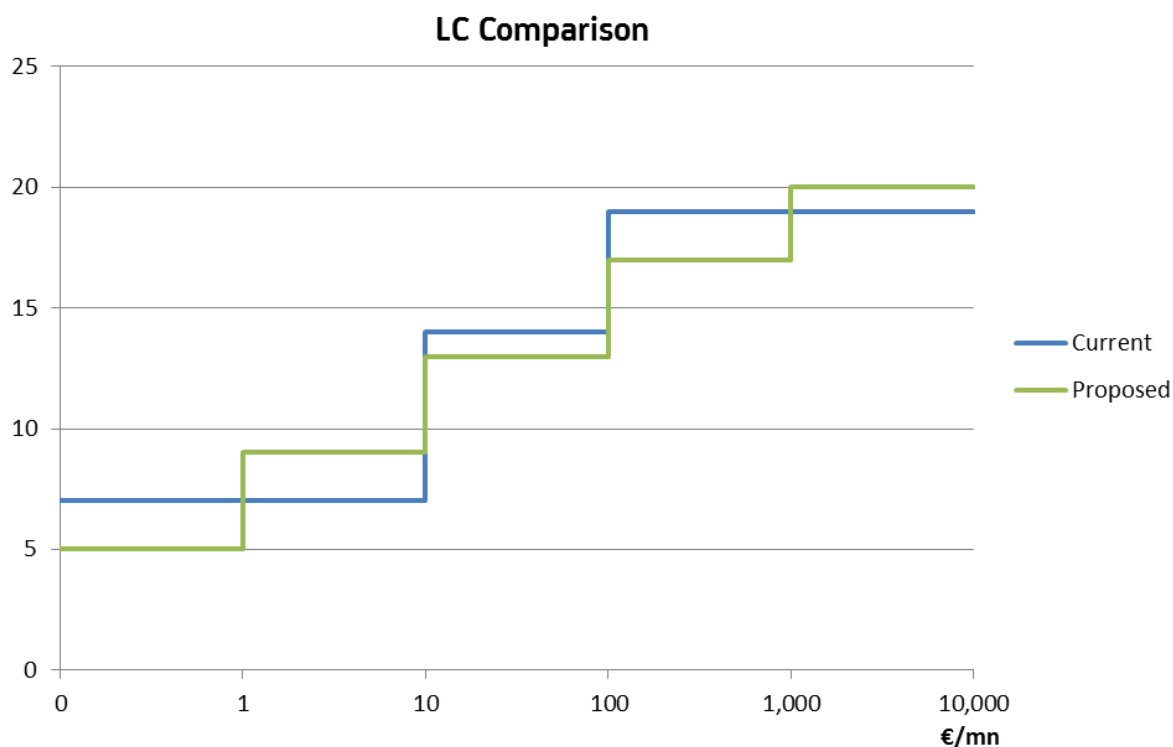
Av. Annual Loss	Coefficient
Total	α_1
$\geq 1 \text{ €/mn}$	α_2
$\geq 10 \text{ €/mn}$	α_3
$\geq 100 \text{ €/mn}$	α_4
$\geq 1 \text{ €/bn}$	α_5

This would allow to recalibrate consistently downwards the multiplying factors used in the formulas reducing the overall impact for the most virtuous banks and penalizing relatively more very large banks which have suffered higher historical losses (i.e. $\geq 1 \text{ €/bn}$).

This has also the merit to be aligned with the Basel's intentions having capital absorption figures proportional to bank size and loss experience.

In case there is no possibility to change the buckets, see the results of analysis in Appendix 1, which proposes a parameters' reduction.

In particular, we propose the coefficients $(\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5) = (5, 4, 4, 4, 3)$ for the Loss Component calculation (see next figure reporting current and proposed cumulative coefficients).



6. In order to make the Business Indicator component more linked to the operational risk exposure of a bank, different parameters should be considered for bank largely exposed to investment banking and with trading intensive business models (as those business lines generated the highest systemic losses i.e. libor rigging, embargo fines), keeping the principle of current standardized formula with different percentages applied to different business lines. Academic studies demonstrated that some business lines are less risky, from the operational perspective, than other: in particular, Moscadelli (cfr. Marco Moscadelli, "The modelling of operational risk: experience with the analysis of the data collected by the Basel Committee", Banca d'Italia, Temi di discussione Number 517 - July 2004.) pointed out that "Concerning the outcomes of the analysis, there is **clear evidence** of the considerable magnitude of operational risk in the businesses carried out by the 2002 LDCE banks as well as **of the differences in the riskiness of the BLs** (in terms of both the time-unconditional severity and the 1-year aggregated capital figure). These differences persist after comparing, for a typical international active bank, the BLs capital figures with the average Gross Incomes and obtaining ratios as the coefficients set in the revised framework of the Capital Accord. In practice, the bottom-up analysis of the 2002 LDCE data suggests that **the actual operational riskiness of the BLs may be captured in a more effectively way by setting, for the regulatory coefficients of the Standardised Approach, a wider range than the current one**; besides, for the eight BLs as a whole, the implied

capital ratio results to be a slightly lower figure than the coefficient envisaged in the Basic Approach."

The SMA, as expressed in the consultative document, does not recognize the evidences and smooth the different operational riskiness of the business lines though the application to the Business Indicator (BI) of **a coefficient diversified only by size and not by business line**. This smoothing appears to be even more evident for the smaller institutions, as long as for those included in Bucket 1 (i.e. BI lower than €1bn) where the Loss Component does not apply. Under the SMA, small specialized institutions will be subject to the same capital requirement for operational risk of a more risky, ceteris paribus, of a much more risky bank (e.g active in investment banking or trading intensive business models), as it will not benefit from its experience of lower operational losses.

We believe this is a counterintuitive and unwanted consequence of the SMA and therefore suggests to calibrate the BI Component differently according to the non-homogeneous risk of each business line and not only to the size of the institution.

7. In the following parts of the BI formula we suggest to insert Absolute value of the items within the bracket:

$$\begin{aligned} & \text{Max}(\text{OOIavg}; \text{OOEavg}) \\ & \text{Max}(\text{FIavg}; \text{FEavg}) \end{aligned}$$

Q.2 What are respondents' views on the inclusion of loss data into the SMA? Are there any modifications that the Committee should consider that would improve the methodology?

1. In general, the **risk sensitiveness could be improved by increasing the influence of the loss component in the result of SMA** (the impact of the BI component is still high compared to the LC). Actually the **logarithmic function smoothers the differences among banks, so that a particular bank with extreme losses will have a limited impact on its capital compared to another bank with limited losses**. As discussed above in the introduction chapter, it should be evaluated the possibility to increase the level of contribution of the LC component, providing a higher weight for the quoted component, reserved to the banks with higher standards in their operational risk management framework.

2. In our opinion it would be correct to articulate the LC multiplier system in a different way, for example:

- a. introduce **a below 1 million bucket and below 1 billion bucket**
- b. reducing the actual **multiplier**, at least for **losses below 1 million** euro, (i.e. 5 instead of 7) and consider a less severe treatment for **extreme events or extreme years** in term of total loss (trimming the data set or applying less severe multipliers)
- c. **consider frequency**. The calibration of the Loss Component should be improved considering also the **number of losses**. Indeed, the current definition of the loss component takes into account only the amounts of losses, leading to some inconsistencies. For example, one loss of 1 €/bn is counted 19 times, and at the same time 10 losses of 100 €/mn are counted 19 times as well.

3. Application of weighting factors in loss component calculation. The 10-year holding period does not consider different weights according to the distance in time between the loss events and the reporting year. Loss events that are far from the specific reporting year can be linked to past operational and/or market contexts (eg. a loss impact of 50 mln occurred 10 years ago may have caused the withdrawal of the bank from that specific business **but the loss event would continue to impact on the capital requirements for the next 10 years**). It is suggested to **introduce weighting factors to differentiate loss events according to their distance from the reporting year and to introduce less conservative weights for the average total annual losses of past exercises**. This proposal shall i) incentivize banks to implement strong remediation actions and ii) avoid any cliff effect in capital requirement that may not reflect the internal control framework efficiency.

4. A reduction of the 10 years' historical window from 10 to 7 years.

5. Scenario analysis factor

To improve the methodology, the Committee could also consider the introduction of a new factor in the formula correlated to **Scenario Analysis** (based on **internal** and applicable **external data**) to include a forward looking measure on the capital charge and to provide a real incentive for banks to improve operational risk management.

6. Identification of losses in each bucket minimizing cliff effects

The loss component can be interpreted differently from the standard/common interpretation. The common interpretation of the loss component could lead to relevant cliff effects if one loss increases exceeding the 10 €/mn or 100 €/mn thresholds.

The loss component can be interpreted in such a way that only the exceeding amount above the thresholds should be multiplied by the relative coefficient³:

³ For the sake of simplicity we do not consider here the request of the two additional bucket "above 1 mil" and a "above 1 bil".

Loss Component

$$\begin{aligned}
 & \alpha_1 \cdot \text{Average Total Annual Loss} \\
 & + \alpha_2 \cdot \text{Average Total Annual Loss only including loss events above €10 million} \\
 = & \quad \quad \quad (\text{only including the loss amount above €10 million}) \\
 & + \alpha_3 \cdot \text{Average Total Annual Loss only including loss events above €100 million} \\
 & \quad \quad \quad (\text{only including the loss amount above €100 million})
 \end{aligned}$$

where α_1, α_2 and α_3 are the coefficients. In the current setting $\alpha_1 = 7, \alpha_2 = 7$ and $\alpha_3 = 5$.

This approach allows to have a loss component less affected by cliff effects. Figure 5 shows the Loss Component increase as a function of an additional single loss amount for both interpretations:

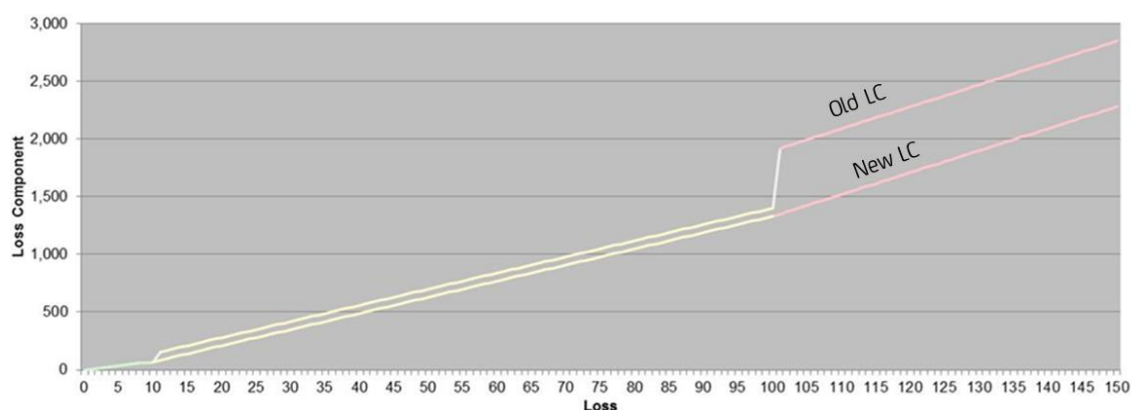


Figure 5: Loss Component - New Interpretation

This interpretation of the loss component is also consistent with the business indicator bucketing definition.

It has to be mentioned that such approach can be calibrated by Regulators using the current QIS data. For each threshold (10 €/mn or 100 €/mn), the total annual loss amount above the threshold can be calculated as the difference between the Total Annual Loss only including loss events above the threshold and the annual number of events above the threshold multiplied by the threshold itself.

7. Loss Data set

- Loss Data used for the calculation of the Loss Component should be explicitly considered under net terms by taking into account all **not insurance recoveries** allowing to net recoveries from the SMA loss data set.

This point is absolutely important and crucial in particular for payment cards business where, in addition, **recovery system is ruled** and controlled by the international circuits (known as “charge back”

- operating rules).
- Loss Data used for the calculation of the Loss Component should be netted from **insurance recoveries** at least in case they have occurred within one year from the claim notification to insurer.
 - **Increase the minimis gross loss threshold from €10,000 to €20,000;**
 - **Losses that will not happen again in the future** should be removed from the loss history, for instance in case of discontinued business or operations.
 - Since there is a direct correlation between the quality of internal controls and the risk level in terms of likelihood/probability of loss events, forward looking information should be included in SMA, so that it better reflects the improvements of risk management. This could be evidenced by controls put into place and **investments in this area, the amount of which could be subtracted from the loss amount.**

Q.3 What are respondents' views on this example on an alternative method to enhance the stability of the SMA Methodology? Are there other alternatives that the Committee should consider?

The following paragraphs are based on BI and LC Components data gathered from a sample of 18 Italian intermediaries, over the years 2013-2015. Charts represents data for buckets 2 to 5 only.

1. SMA Alternative

Annex 2 of the consultative document presents an example of an alternative method that modify the Internal Loss Multiplier in the formula in paragraph 35. The SMA Capital formula becomes the following:

$$\text{SMA Alternative} = \begin{cases} \text{Bi Component,} & \text{if Bucket 1} \\ 110 + (\text{Bi Component} - 110) * \left(\frac{m * \text{LC} + (m-1) * \text{Bi Component}}{\text{LC} + (2m-2) * \text{Bi Component}} \right), & \text{if Bucket 2-5} \end{cases}$$

where m is a factor to be calibrated.

In the following charts scattered points represent intermediaries. They show the relative impact of SMA Alternative formula when compared with SMA one. In order to avoid any dimensional bias, we have normalized the two capital requirements as their ratio to the "historical" capital requirement (for the same years). Therefore, on the two axes, values greater than 1 imply an increase in capital requirements.

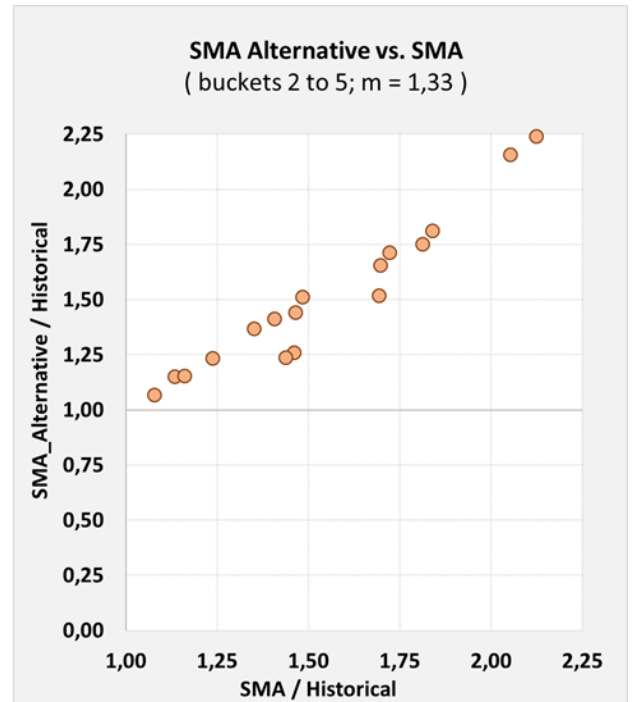
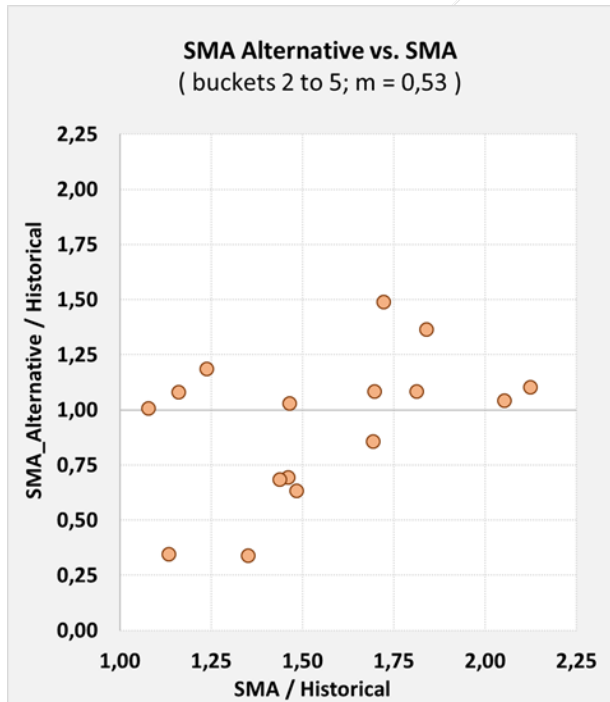
Under the constrain to minimise the sum of squared differences between historical capital requirement (2013-2015) and SMA alternative (simulated for the same years), two optimal values for m have been analyzed.

Under such constrain, the analysis shows that values of m greater than 1 lead the Alternative formula results to be very similar to the SMA ones (plot on the right). On the other hand, in order to (approximately) maintain the same level of capital, only values for $m < 1$ should be considered. However, setting $m < 1$ seems to be incoherent with the purpose of the proposal.

Therefore, **the formula in Annex 2 of the consultative document implies no benefits and cannot maintain the current levels of capital requirements.**

$m < 1$
the optimal value for m is 0,53 (*)

$m > 1$
a (local) optimal value is 1,33



(*) Caveat: setting m to a value < 1 is not coherent with the proposed approach and should be avoided.

Local optimal value for $m > 1$. No substantial difference with respect to SMA formula (dots approx. stay on a 45° line).

2. SMA Formula: other alternative definitions

SMA can be improved (i.e. capital neutrality, risk sensitivity, comparability, forward looking) acting on different components (like BC and LC⁴) but also on the structure of capital requirement formula.

Focusing on the latter approach, three different SMA revised formulas (Alternative A, B and C) were tested for Buckets 2-5 under the constrain to minimise the sum of squared differences between historical capital requirement (2013-2015) and SMA alternative. **Bucket 1 should be allowed to opt in or to use the proposed SMA formula.**

⁴ In section 2 of the general comments we have already suggested a different combination between BI and LC, where the percentual weight assigned to the LC component is related to the qualitative standards of the operational risk framework adopted.

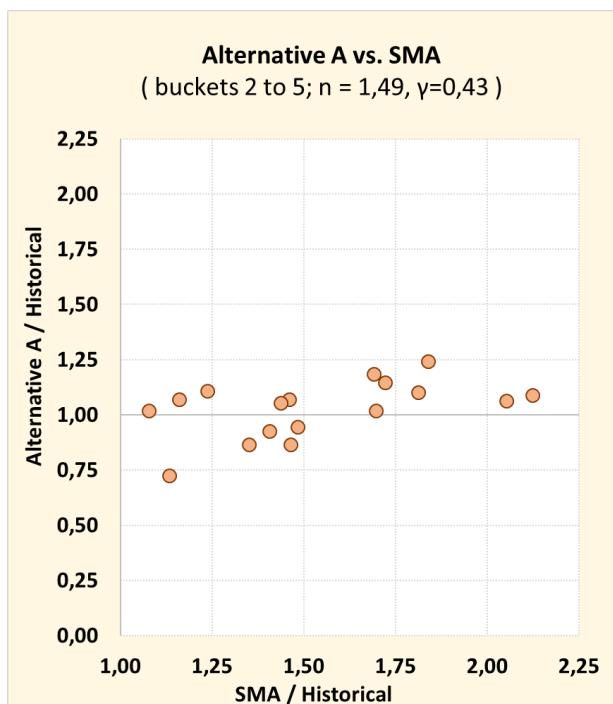
$$\text{Alternative A} = \text{BI Component} * \sqrt[n]{\frac{\gamma * LC}{\text{BI Component}}}$$

$$\text{Alternative B} = \alpha * \text{BI Component} * \ln \left(\exp(1) - 1 + \frac{\beta * LC}{\text{BI Component}} \right)$$

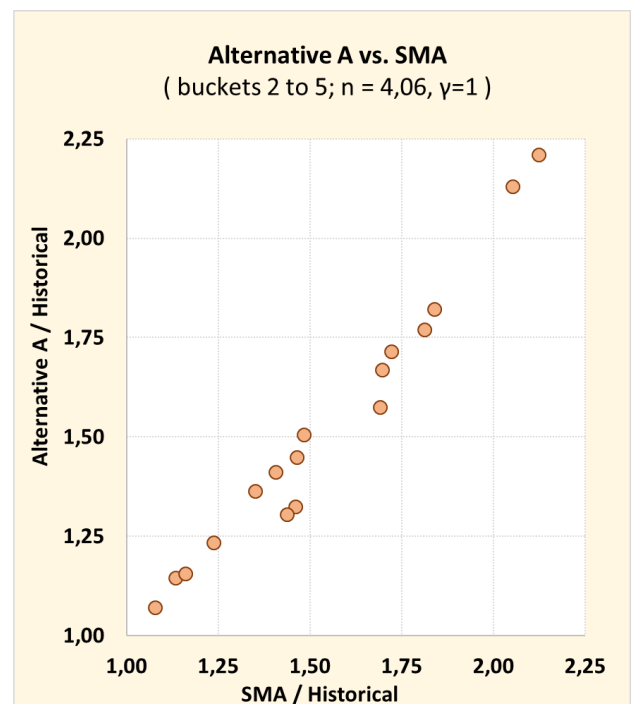
$$\text{Alternative C} = \varepsilon * \text{BI Component} * \sqrt{0,2 + 0,8 * \left(\frac{\delta * LC}{\text{BI Component}} \right)^{1,5}}$$

The following charts represent the results of each of the three alternative formulas. As before, in the following charts scattered points represent intermediaries:

$$\text{Alternative A} = \text{BI Component} * \sqrt[n]{\frac{\gamma * LC}{\text{BI Component}}}$$

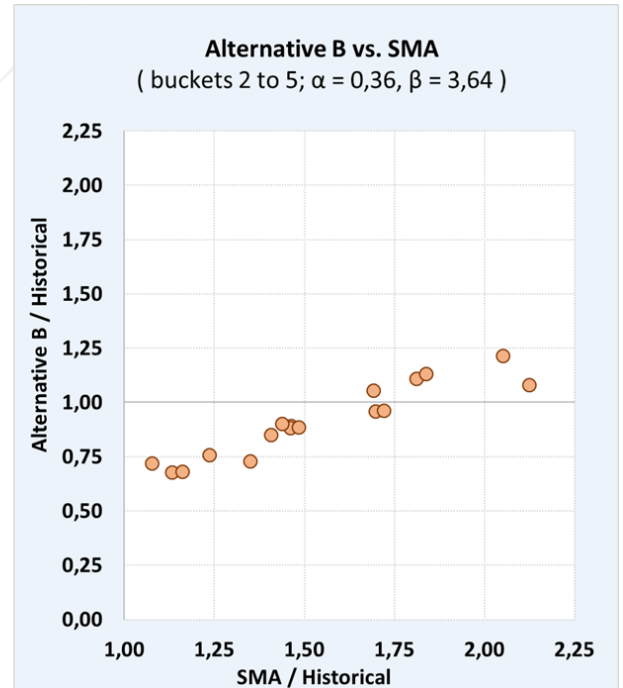
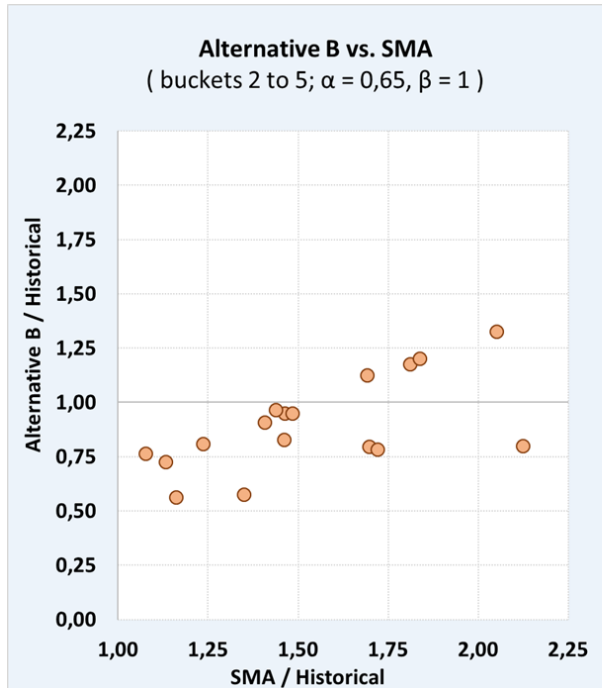


The chart shows best results based on sample data. Optimal parameters lead to minimal differences with historical values.



The γ value should be set less than one. Otherwise, no substantial improvement can be obtained, with respect to the SMA formula.

$$\text{Alternative B} = \alpha * \text{BI Component} * \text{Ln} \left(\exp(1) - 1 + \frac{\beta * LC}{\text{BI Component}} \right)$$



The Alternative B formula is very similar to the SMA one: however, two parameters have been added in order to modify the relative weight of BI and LC components.

The chart shows results of setting parameters to values coherent with many proposals in the way of a reduction of the relevance of both components.

The parameter α has reached its optimal value (under the above mentioned constrain and with β set equal to 1). Actually, β multiplies the whole ratio in the parentheses (LC/BI): once BI is reduced – by applying the α factor – the multiplier of LC is also equal to 0,65 ($=0,65 \times 1$). In other words, the ratio in the parenthesis can be read as:

$$\frac{0,65}{0,65} * \frac{1,0 * LC}{\text{BI Component}} = \frac{0,65 * LC}{0,65 * \text{BI Component}}$$

The above results leads to the conclusion that the scale of the two SMA component BI and LC are over-weighted. Even if we do not deem any capital increase is necessary, we strongly ask at least to move with a sustainable path from current

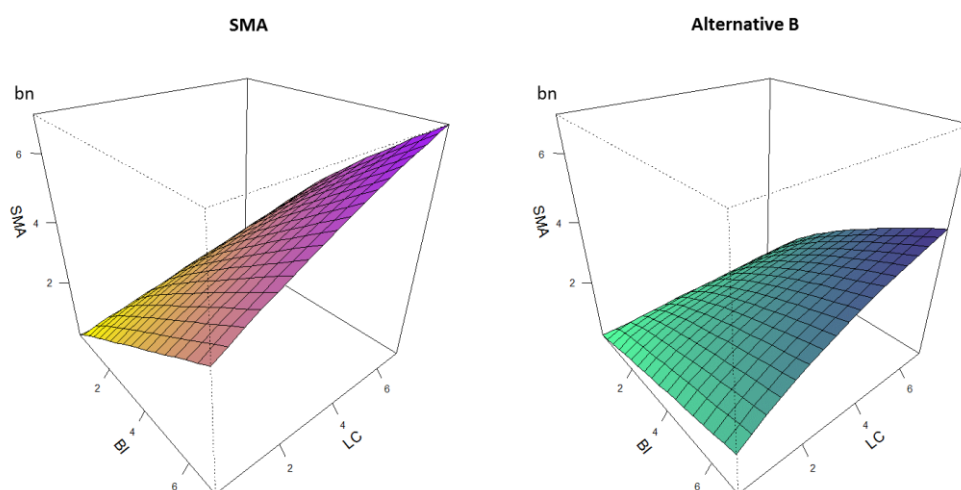
The parameters α and β have reached their optimal value (subject to the above mentioned constrain). The result implies a relevant change in the relative weight of the two components.

Note that β multiplies the whole ratio in the parentheses (LC/BI): once BI is reduced – by applying the α factor – the multiplier of LC is actually equal to 1,31 ($=3,64 \times 0,36$), instead of 3,64. In other words, such ratio can be read as:

$$\frac{0,36}{0,36} * \frac{3,64 * LC}{\text{BI Component}} = \frac{1,31 * LC}{0,36 * \text{BI Component}}$$

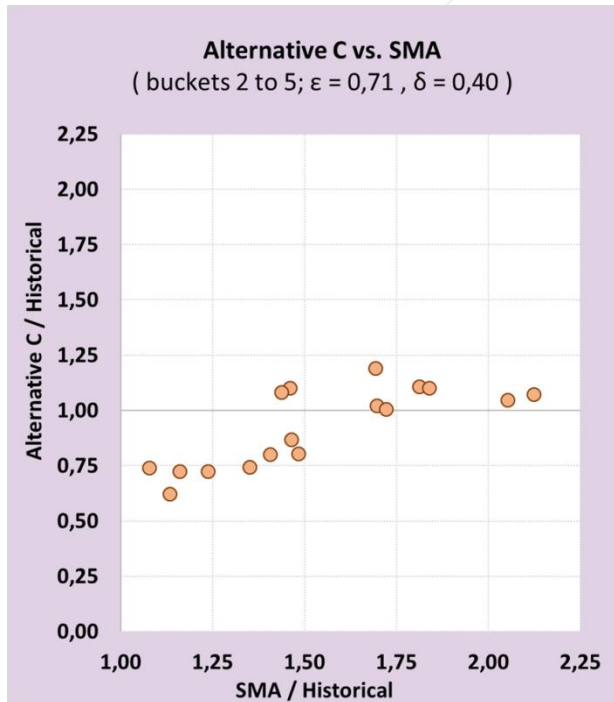
capital requirements to the SMA implied level of capital by way of a **“gradual phase-in process”** scaling **BI** an **LC** from **0,65** to **1**. During this path a new assessment of the correct calibration could be carried out in order to definitively define the SMA elements parameters.

Under alternative B, collected data would suggest values for alpha and beta that modify the shape and the slope of the SMA curve with **a bearable change of capital requirements both for banks and regulators**

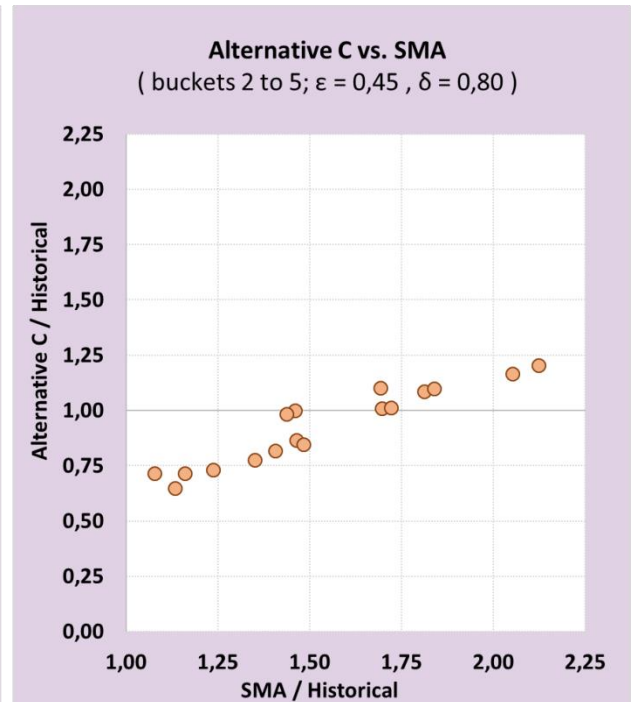


Alternative B allows to modify the slope and the shape of the curve [left: SMA curve, right: Alternative B with $\alpha=0,36$ $\beta = 3,64$].

$$\text{Alternative C} = \varepsilon * \text{BI Component} * \sqrt{0,2 + 0,8 * \left(\frac{\delta * LC}{\text{BI Component}} \right)^{1,5}}$$



The chart shows the best possible result (under constrain).



A more linear pattern is obtained using different (sub-optimal) parameters.

APPENDIX 1

SMA transparency and sensitivity

An analysis has been performed⁵ on the coefficients assigned to the Business Indicator buckets in order to compute the BI Component.

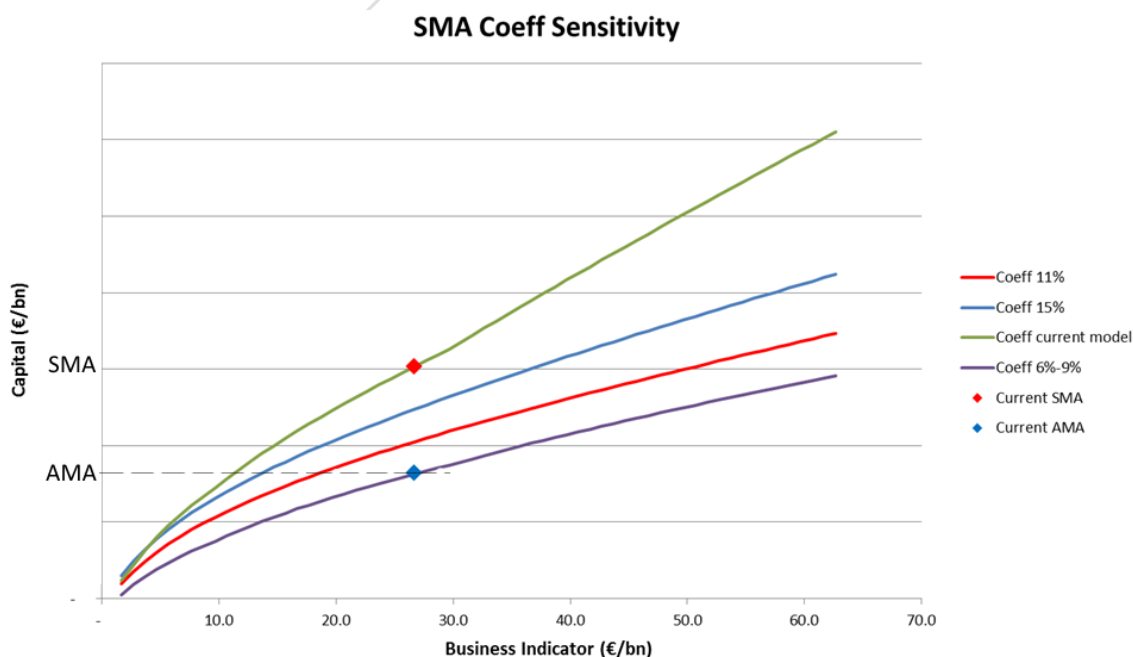


Figure 1: SMA sensitivity to coefficients

Considering the same BI buckets structure and varying the coefficients, it can be observed that, in order to reach the current regulatory capital computed through AMA model⁶, the coefficients should be decreased to values lower than the range of 6% to 9%:

⁵ The analysis has been performed by one of the most significant AMA Italian banks. The hypothesis is that the Loss Component has been fixed using the last 10 years' data of the bank (2006-2015), while the business indicator is varying. The Business Indicator of the bank is around € 27 bn. You can observe that, for matching the current AMA bank capital requirement, it is necessary to recalibrate the BI Component coefficients to the range 6%-9%. Moreover, this proposal includes a more gradual coefficients progression, making less significant the super-additivity issue.

⁶ This significant AMA Italian bank shows a ratio SMA on AMA of around 185%. On the basis of ORX benchmark, we observed that the average ratio for European banks is around 180%. As a consequence, we can state that the proposed recalibration of the BI Component coefficients would make the SMA impact nearly neutral in average. As stated in BCBS Consultative Document: "The objective of these proposals is to not significantly increase overall capital requirements.". Therefore, we think this objective would be met with the proposed recalibration.

BI		Coefficient
-	1,000,000	6%
1,000,000	3,000,000	7%
3,000,000	10,000,000	7%
10,000,000	30,000,000	8%
30,000,000	-	9%

Figure 2: BI reviewed coefficients

The bucket coefficients proposed in the SMA consultation are aligned with those considered in the first consultation document published in October 2014. In that case, it seems the coefficients have been calibrated considering a data set composed mainly of non-AMA banks. This suggests that a downward recalibration of coefficients is needed in order to take into account the disproportionally negative effect of the new approach on AMA-compliant European banks.

Figure 2 shows the comparison between the proposed SMA position (green line) and the capital requirement obtained by setting the coefficients in order to reach AMA capital level (purple line). In blue and red are reported the capital setting fixed coefficients, 11% (lowest BI coefficient considered) and 15% (under to the BIA approach, for benchmark purposes) respectively. In all cases, the capital would be higher than under the current AMA model, highlighting the very weak relation between the proposed Business Indicator measure and the bank risk exposure evaluated via internal risk models.

APPENDIX 2

Why cannot Business Indicator be considered as a good proxy for Operational Risk exposure?

The Business Indicator construction has been detailed in the BCBS paper issued on October 2014. In order to find the indicator which better captures a bank's risk exposure, several statistical analysis have been performed by BCBS, comparing the explanatory power of 20 candidate indicators built from balance sheets and/or income statement items. From the analyses, the Business Indicator was found to be overwhelmingly superior in capturing a bank's operational risk exposure, following a non-linear relation.

However, analyses have been performed considering only a limited sample of banks. Outlier observations have been excluded from the data set obtained with the OpCaR calculator, in order to avoid that the estimates were affected by very few large points (mainly representing AMA banks) rather than by the bulk of the data, which typically identify BIA or TSA/ASA banks. Specifically, the banks with an extremely large value for BI ($BI > €30 \text{ bn}$) or very large ratio with OpCaR ($CaR/BI > 50\%$) were removed by the sample.

In this way, the selection and construction of the better proxy indicator have been done considering not all banks, but excluding above all AMA ones. Indeed, the percentage of non-AMA banks represented about three quarters of the banks in the sample.

The aim of the October 2014 consultation paper was to review the simpler approaches (i.e. TSA and BIA), but in the March 2016 consultation paper the withdrawal of AMA in favour of the use of a standardized measurement have been considered, so it cannot be considering as the better proxy indicator for bank's operational risk exposure.

Therefore, the Business Indicator is an aggregation of P&L items which capture systemic risk profile at a certain point in time, but neither it is a meaningful financial indicator (i.e. it sums up several budget items without resulting in a single value adding financial number, making it difficult to estimate for an outside market participant) **nor it actually represents the level of operational risk of a bank.** Operational Risk is by nature mainly "behavioural" (with main trigger being conduct risk) and its exposure can't be caught by financial statement items as it is not embedding any information on the control system in place in each bank. As a consequence, banks with similar BI have huge differences in their loss experience with influence of the loss component being to law to achieve a real risk sensitivity.

Moreover, in absence of a full convergence between accounting principles applied worldwide and a planned harmonization process, the BI would be barely comparable across banks, as long as credit institutions, applying IAS/IFRS rather than US-GAAP (just to mention two well-known examples), account differently for operating/fee income and expenses.

With the following analysis performed using financial statement and loss data of an AMA bank from years 2009-2015 we prove that the BI is a very poor predictor of operational risk exposure and that most of its components show no relation to operational risk losses.

From a comparison between the Business Indicator and total OR loss (Figure 1 BI vs Total Loss) we observe that:

- I. The BI shows high correlation to the interest margin (see below) and more generally to the bank's business size but not to the level of operational risk loss.
- II. Due to the European economic downturn, the BI has been steadily declining in recent years. However, during the same period, OR losses show a significant increase. This confirms that OR losses could rise in times of economic adversity, due to restrictive policies and cost-cutting measures which affect the quality, performance and reliability of systems, procedures, client practices, etc
- III. The BI, being strongly tied to financial statement items, is unable to capture the OR loss trend and therefore cannot be considered a risk-sensitive measure.

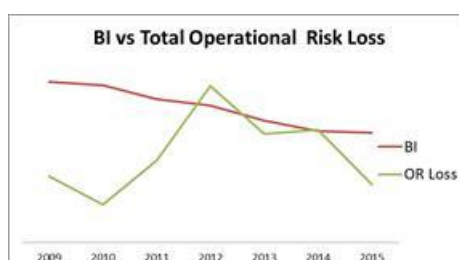


Figure 1 BI vs Total Loss – (Note: different scales used)

Lastly, we compare the individual components of the SMA and OR losses. Starting from the macro-components (Figure 2 BI Macro-Components vs Total Loss) we observe that:

- I. None of the three components captures OR loss behaviour.
- II. The ILDC follows very closely the interest margin, which has no relation to OR losses.
- III. FC and SC are almost flat, with minor variations that do not match the spikes in OR loss.

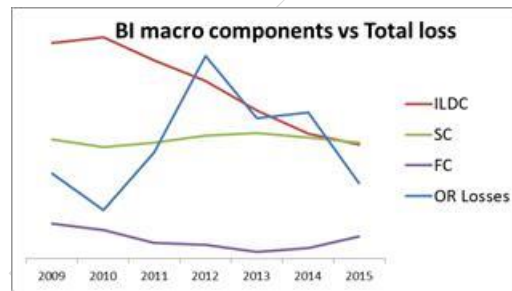


Figure 2 BI Macro-Components vs Total Loss

Looking at sub-components (Figure 3 BI Sub-Components vs Total Loss) we note that:

- I. None of sub-components captures OR loss behaviour, except for OOI and OOE.
- II. OOE is the only component showing relation to OR losses. OOE is obviously correlated because it contains losses incurred as a consequence of operational loss events and provisions which account for a significant part of OR losses. However, it must be kept in mind that OOE account for a very small part of the BI and therefore they are not enough to guarantee and adequate level of risk sensitivity.

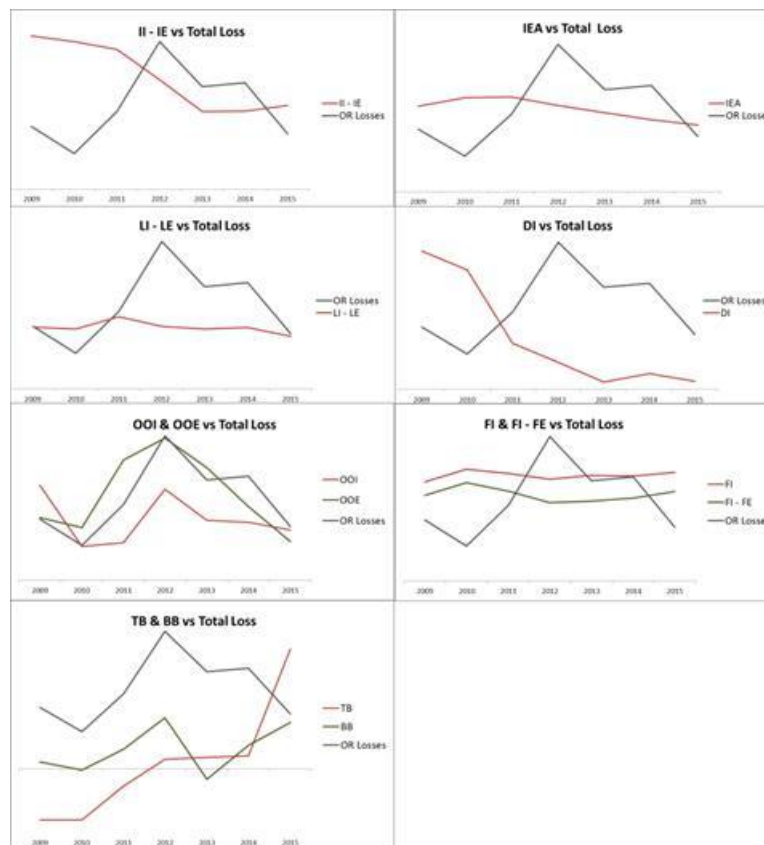


Figure 3 BI Sub-Components vs Total Loss