

Torino, 1st June 2016

Object: *Response to Basel Committee consultation paper on Standardised Measurement Approach*

Intesa Sanpaolo (ISP) welcomes the opportunity to express its view on the Basel Committee consultation paper on Standardised Measurement Approach (SMA) for Operational Risk and supports the attempt to reduce the elements that hamper comparability among AMA banks and between AMA and non-AMA banks.

Intesa Sanpaolo has participated and fully supports the industry comments formulated by the international (IIF, EBF) and national (ABI) industry groups. Hereafter only individual comments on the most relevant aspects have been highlighted and a specific proposal has been drafted.

General considerations on the proposed withdrawal of the AMA

Intesa Sanpaolo supports the Committee's objectives of comparability and simplicity underlying the new proposal of Standardised Measurement Approach for operational risk, trying to reduce variability in risk-weighted asset calculations and promoting a level playing field. However, this should not happen at the price of losing risk sensitivity. Since the introduction of Basel II, many banks have been developing their operational risk management framework grounded on sound internal models that are used for regulatory capital purposes as well as for managerial purposes. These framework have proven to be effective, at least in the case of Intesa Sanpaolo, to reduce the experienced operational losses over time and to raise the standing of operational risk at the same level as credit and market risk (where internal models are allowed and used). The bottom line is then that we believe that internal models for operational risk, although substantially revised to achieve the Committee objectives of simplicity and comparability, should be retained in the revision of the Basel framework.

Nevertheless, if the Committee would still proceed in its intention to only allow a standardized approach for operational risk, we strongly advocate that at least some features of AMA should be preserved in the new SMA. Capital should be detained and assigned efficiently according to the risk profile of each institution, maintaining consistency, and in particular the order relationship, between minimum regulatory standards and the managerial internal view (ICAAP and Stress

Testing). Furthermore, incentives to improve risk management practices should be retained effectively in Pillar I measures.

Privileging the simplicity and comparability aspects over risk sensitivity, the proposed SMA methodology is missing the objective to create a level playing field, the main effect being an increase in the level of capital especially toward larger institutions and specific jurisdictions.

In particular, the ORX survey of SMA requirements has demonstrated that the SMA is not capital neutral in comparison to current regulatory approved capital. Of the banks surveyed, the 75% would face a capital increase. The mean bank in all regions experiences a capital increase of nearly 32%, with the European banks experiencing, on average, the highest increase of 63%.

Although not explicitly mentioned in the consultative paper, there is the assumption that models will continue to work under Pillar II. Given current calibration level, for most European banks the incentive to maintain and improve models based on Pillar II within the SREP is minimal in the end.

General considerations on the SMA proposal

In general, ISP is critical on 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). Furthermore, the proposed approach to determine the minimum requirement is largely based on size with only a minor correction depending on the historical losses of each institution. In particular, the Business Indicator (BI) to be calculated in order to determine the BI Component (BIC) of SMA methodology is not deemed to be risk sensitive: a simple example could clarify this issue. One Euro of BI derived from corporate finance business in the US carries a much higher level of risk than the same one Euro of BI originated from the same business in continental Europe while in the SMA they are treated in the same way. The factor based on the historical losses, although going in the right direction of introducing some risk sensitivity, has only a limited influence due to way it is introduced (logarithmic function).

Moreover, considering the Loss Component (LC), ISP believes that further clarifications on rules and definitions and precise criteria to be adopted across jurisdictions should be provided (e.g. definition of incurred loss, clear definition of which reference date to use, clear treatment of root events, inclusion or exclusion of loss data accounted by subsidiaries no more in Group perimeter) and remaining issues should be solved (e.g. double counting of provisions, exclusion of insurance policies as risk mitigating factors, volatility of the expected loss factor).

In particular, ISP detected the following areas of improvement:

I) Super-additivity

It is unclear at which level the whole SMA applies: while it is stated that the BI is calculated at consolidated or sub-consolidated level, it is not evident whether the Internal Loss Multiplier has to be determined at the same level (and then used for all subsidiaries) or whether it has to be calculated at each subsidiary level: under none of this alternatives the operational risk capital

requirement for operational risk at consolidated level will be the same as the sum of the requirements at each subsidiary level.

As currently defined, the SMA should be calculated on a consolidated basis. This is an important issue for banking groups whose capital requirements are much higher on a consolidated basis than if calculated on a stand-alone basis. This super-additive effect of SMA at group basis may lead to capital allocation problems and level playing field concerns for subsidiaries of big banking groups.

II) Over-sensitivity to Business Indicator

ISP agrees that the use of gross income to determine operational risk (OR) capital is mainly inadequate. However ISP queries whether the newly proposed coefficients provide a more quantitative correlation to the actual risk profile of an institution. In particular, as mentioned above, the Business Indicator is not a risk sensitive measure; in fact, the ORX benchmark shows a very strong correlation of BI to gross income.

The bank-specific loss data have been introduced in the formula in order to enhance the risk sensitivity of the previous standardized approach. However, it has been 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.

ISP believes that the correction based on losses is too mild and will not provide incentives to good operational risk management. Furthermore, the time series for losses are too long and past and current events are weighted equally and when a large loss event becomes older than the ten years period and drops out of the estimate for the LC it may create a sizeable effect on the final result (cliff effect).

III) European banks heavily penalized

Although the Basel Committee's objective with this proposal is to not significantly increase overall capital requirements, it seems indeed that the SMA results, with the current settings, in higher capital requirements for a majority of medium to large banks, even for those with good profit margins and low losses records. According to the results of ORX benchmark:

- 75% of banks would see an increase in capital, equating to an additional €115 BN Pillar I capital;
- European banks see the biggest increase under the SMA, experiencing on average a 63% higher capital charge in comparison with current regulatory approved capital.

The current proposed formula for the SMA, in our view, would not allow a recalibration that would reduce the impact on the system with, at the same time, conservatively keep a higher minimum requirement for banks having experienced repeatedly high level of losses. Only a change of the SMA structure would allow to reach the above mentioned goal.

In order to ease some of the above mentioned points - from I) to III) - ISP presents some recommendations to be considered for improving the SMA proposal; for further details see answer to question Q3.

IV) Insurance policies benefit

ISP firmly believes that insurance policies must be given some credit in the SMA, as they reduce effectively the amount of losses that could hit P&L. This may be done by:

- recognizing the risk transfer provided by standardized insurance contracts as an ex-post deduction from the capital requirements for operational risk;
- defining eligibility criteria and haircuts for the standardized insurance contracts in a similar way as for the guarantees for the CRM.

It is essential to maintain the possibility to use insurance as an active operational risk management tool and to include its effects in the SMA calculation. Effectively applying an insurance scheme has multiple positive aspects and allows the “pricing” of operational risk against a third party with opposite economic incentives (i.e. buyer and seller).

V) Effective risk management practices

ISP is concerned that the SMA proposal is very much capital focused. Capital is not the sole solution to improve operational risk management. The ten years period considered for the Loss Component is effectively too long: institutions during this period will most likely have made improvements that should be taken into consideration.

Major investments aimed to reduce operational weaknesses or to reinforce the internal control effectiveness should be recognized in the SMA.

The consideration of these elements would encourage banks to continuously carry out risk reduction policies (i.e. implementation of remediation plans, investments in internal controls, risk management, compliance and strategic review of the businesses, with possible cessation of certain business lines and products).

To be properly considered, the above mentioned elements should be included in a new specific accounting item and be appropriately deducted from the Business Indicator component (see also answer b) to question Q1).

Specific questions

Q1. What are respondents' views on the revised structure and definition of the BI?

ISP supports certain improvements set by the BCBS in the BI Component in the present consultation. These eliminate some distortions visible in the last consultation document published in October 2014.

Nonetheless, ISP highlights the following specific comments in relation to the revised structure and definition of the BI:

- a) The Operational Risk losses/provisions should be excluded from the Other Operating Expenses (OOE) to avoid a double counting when the same losses/ provisions are included

in the Loss Component. While the provisions cover Expected Losses, capital requirements should cover the Non-Expected ones. Including provisions on the BI calculation may result in double counting of provisions in both the BI and the Loss Component;

- b) The major investments aimed at enhancing the Internal Control System and improve operational risk deficiencies should be included in a new specific accounting item and then deducted from the Business Indicator component.

Q2. 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?

ISP supports the inclusion of losses in the SMA as losses are a proxy to determine the risk profiles of the institutions (as it is clearly stated in the Basel definition of Operational Risk). However, the use of historical data only does not help the bank to improve the strength of its processes and controls.

Q3. What are respondents' views on this example of an alternative method to enhance the stability of the SMA methodology? Are there other alternatives that the Committee should consider?

To answer this question and at the same time address some of the previously mentioned weaknesses ISP has developed a specific proposal.

The Intesa Sanpaolo alternative proposal

The SMA proposed in consultation by the Basel Committee has basically the goal to connect the capital requirement to both the size of the institution through a fraction the Business Indicator (BI) and a multiple factor of the Expected Loss. Some critical aspects of the SMA that have been raised are:

- SMA is very sensitive to size and only mildly sensitive to losses;
- Although not very sensitive the Loss Component of, the SMA may potentially introduce a certain degree of volatility;
- The time series of the losses set at ten years is very long and not aligned with the time scale of structural change processes that in individual banks and the financial system as a whole have a much shorter timeframe;
- For groups, the sum of the individual requirements of group subsidiaries can be materially smaller than the consolidated group requirement (super-additivity). This may pose a competitive issue with respect to banks not belonging to groups.

To help answer to those issues the following proposal has been drafted.

1. Change the BI component slopes:

Aim:

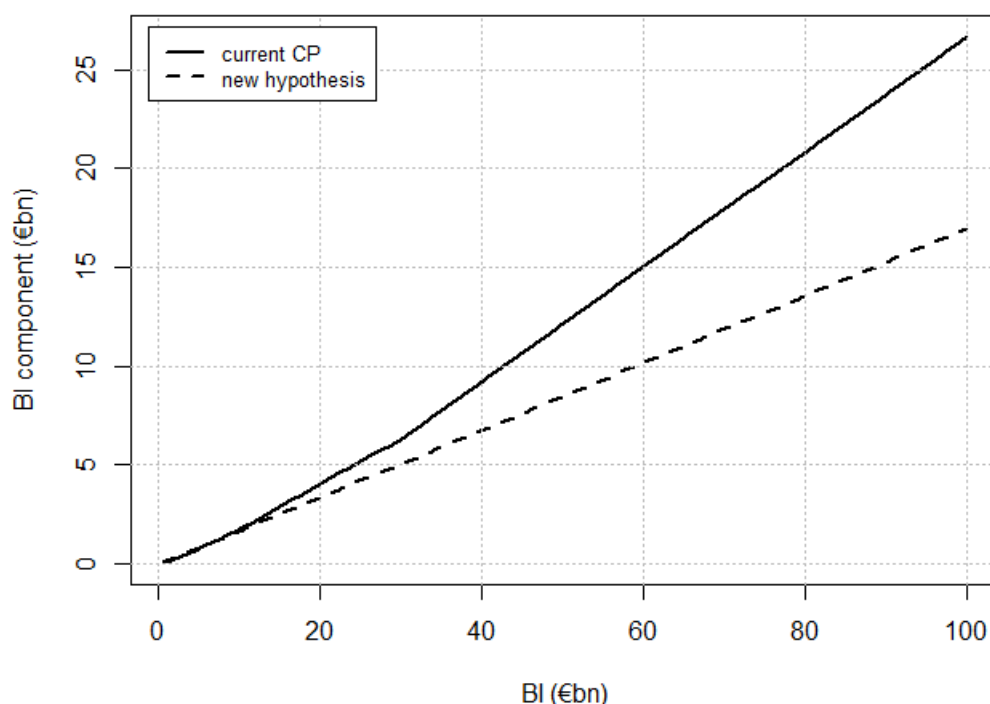
- make SMA less sensitive to size;
- ease solo vs group problem (super-additivity).

Acknowledging the Regulator's bias that a larger bank is riskier than a small bank, but also recognizing that the main element to differentiate between different risk profiles should be the Loss Component, it is proposed here to change the structure of the BI component in the following way:

BCBS Proposal		
BI range	coeff.	offset
< 1	0.11	0
1-3	0.15	0.11
3-10	0.19	0.41
10-30	0.23	1.74
> 30	0.29	6.34

This proposal		
BI range	coeff.	offset
< 1	0.14	0
> 1	0.17	0.14

In the following graph it is shown the difference between the original SMA and the new proposal:



2. Change the Loss component

Aim:

- use loss data following a view based on accounting impact as in the latest Basel QIS instructions;

- make the severity and expected loss factors explicit;
- improve risk sensitivity;
- ease the cliff effect on exit;
- contribute to control volatility on the expected loss factor.

First, let us express the BCBS CP formula in terms of the Expected Loss (EL) factor and the severity factor α^* :

$$LC = \frac{7 \sum_{10 \leq x < 10k} x + 7 \sum_{10k \leq x < 10m} x + 5 \sum_{x \geq 100m} x}{10}$$

where x are the individual losses experienced in a period of ten years.

The LC is clearly a multiple of the total annual expected loss EL. In fact, the above expression can be rewritten as

$$LC = \alpha^* \cdot EL \quad \text{where} \quad \alpha^* = 7\alpha_{10k} + 7\alpha_{10m} + 5\alpha_{100m}$$

where EL is the expected loss above 10,000€, and α_Y is the fraction of expected losses above Y :

$$EL = \frac{\sum_{10 \leq x < 10k} x}{10}$$

$$\alpha_Y = \frac{\frac{1}{10} \sum_{x \geq Y} x}{EL}$$

Now α^* is a severity index because it distinguishes a bank that only experienced individual losses smaller than 10 m ($\alpha_{10m} = \alpha_{100m} = 0$) for which $\alpha^*=7$ (the minimum) from a bank that has mainly very large losses for which α^* can go up to 19 (if all losses are greater than 100m, $\alpha_{10m} = \alpha_{100m} = 1$).

It is proposed here to (i) **estimate the Expected Loss in a more robust way** and (ii) **compute the severity factor taking into account the ageing of losses with time**.

The proposed expression of the Loss Component (LC), considering the previously mentioned improvements, could be written as:

$$LC = AS \cdot TEL$$

Where:

- TEL is the Trimmed Expected Loss, which is a more robust estimator of the Expected Loss and is computed discarding the worst and best of the ten years considered:

$$TEL = \frac{\sum_{10 \leq x < 10k} x - TL_{10k,best} - TL_{10k,worst}}{8}$$

where $TL_{10k,best}$ is the smallest of the yearly total losses (above 10k) and $TL_{10k,worst}$ is the largest. This allows an occasional unlucky year (with a very large loss) or lucky year (with

all very small losses) to be considered an outlier, unless another lucky/unlucky years happens soon. This standard statistical technique, although introducing a bias, would improve the stability of the EL estimation. The bias could then be accounted for in the general calibration of the approach;

- AS is the Ageing Severity factor, which is similar to α^* but older years are given less weight than recent years, allowing a faster response to changes in risk profile because old data are forgotten a bit faster:

$$\alpha'_Y = \frac{\frac{1}{10} \sum_{10y} (x|x > Y) e^{-0.18 t(x)}}{\frac{1}{10} \sum_{10y} (x|x > 10k) e^{-0.18 t(x)}}$$

$$AS = 7\alpha'_{10k} + 7\alpha'_{10m} + 5\alpha'_{100m}$$

where $t(x)$ is the number of years which have passed since the loss occurred, being 0 for last year losses, 1 for the next to last year etc. up to 9. Thus the most recent year is weighted 100%, the oldest year is weighted 20%. No trimming here, all ten years are kept. The coefficient 0.18 makes the effective history kept equal to five years (so the price to pay for a smoother forgetfulness is the introduction of some volatility in this component).

3. Change the formula for the internal loss multiplier

Aim:

- make the whole of SMA less size sensitive and more risk sensitive.

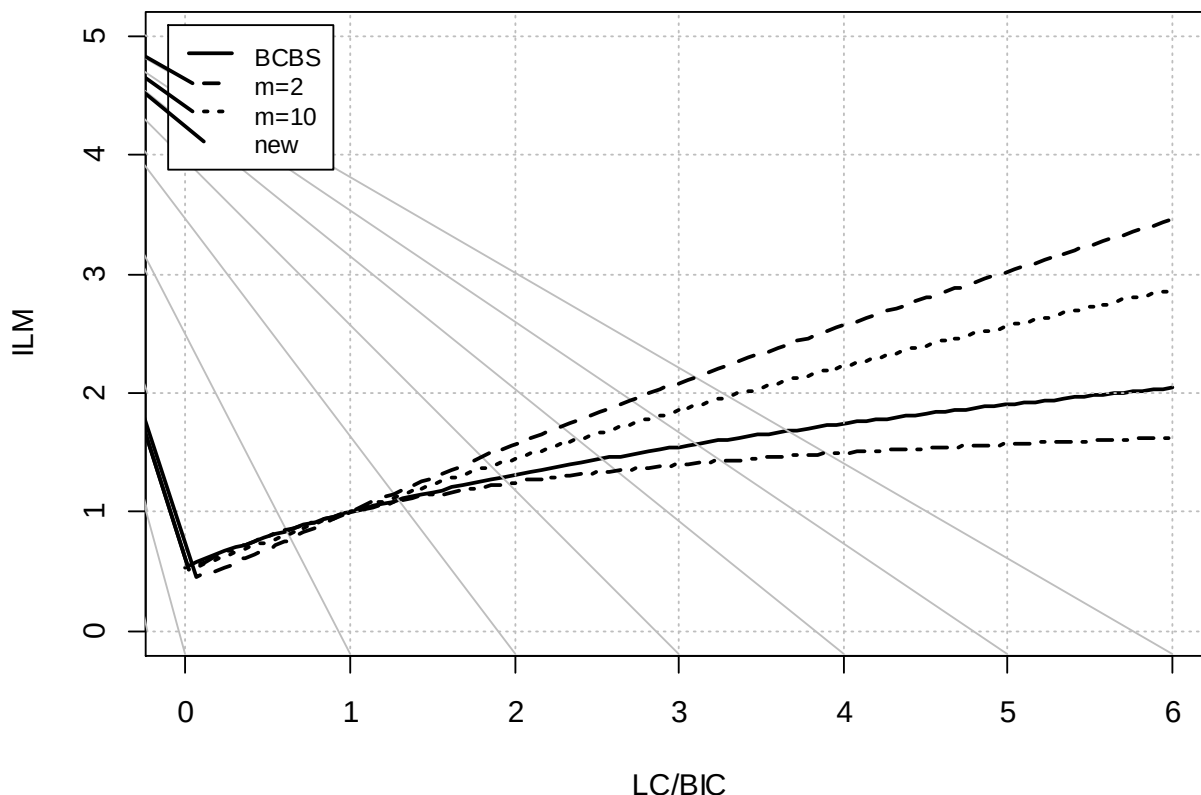
BCBS formula is logarithmic, thus ready to react when LC/BIC is close to 1 or less than 1, but less so when LC/BIC is large.

$$ILM = \log \left(e^1 - 1 + \frac{LC}{BIC} \right)$$

It is proposed here to make the multiplier more fairly reacting over the whole range, with γ a parameter in the range (1 – 1.5) to be appropriately calibrated on the QIS data:

$$ILM = \sqrt[0.2 + 0.8 * \left(\frac{LC}{BIC} \right)^\gamma]$$

In the graph, the above formulae, with $\gamma=1.5$, are compared with the alternative one given in the CP with $m=2$ and $m=10$.



4. Add to the SMA formula a global calibration parameter

The proper calibration of the SMA could then be finalized adding a global calibration parameter β , in the range (0.7 - 1) with which the formula could be written as:

$$SMA = \begin{cases} \beta * 0.14 * BI & \text{for } BI < 1 \text{ € Bn} \\ \beta * \left[0.14 + (BI - 0.14) * \sqrt{0.2 + 0.8 * \left(\frac{LC}{BIC} \right)^\gamma} \right] & \text{for } BI \geq 1 \text{ € Bn} \end{cases}$$

Here of course LC and BIC are to be computed as described previously (sections 1 and 2).

Our preliminary analyses show that a suitable choice of the additional parameters could be $\beta=0.85$ and $\gamma=1.5$. These values should be confirmed by the calibration using the most recent QIS data.