



## AMA-light: Gradual Use

### Summary

The pace of moving towards AMA for OpRisk capital computation appears to be slowing, and it even seems that the appetite for AMA is diminishing. Part of the reluctance may be explained by the immense gap between TSA and AMA. That gap could be bridged by an AMA-light. In addition to the well-established *partial* use, this newsletter argues for *gradual* use, AMA-light. In AMA-light, the models start out based on TSA and the four AMA elements are introduced gradually into the model which can thus evolve over time into a fully-fledged AMA. Since regulators have always displayed a fondness for an AMA floor of some percentage of TSA, the AMA-light merely operationalises that reality.

### Dear reader,

Qualifying for the AMA for OpRisk is not an easy task, and the benefits are not always apparent to banks. After some early enthusiasm, it now appears that, increasingly, banks opt for AMA only under regulatory pressure, rather than out of an inherent desire to manage operational risk through AMA<sup>1</sup>. This is understandable up to a point. Building an AMA model is difficult, validating it is very difficult and once all that is in good working order, using it in practice is not at all straightforward.

At the same time, the other approaches BIA, and TSA are virtually trivial to compute and validate, yet they have no practical value for the business at all. In fact, under these approaches there is nothing the business can do in terms of risk management to influence the capital charge for OpRisk short of doing less business changing the business mix. There are two ways in which AMA may be introduced in a bank that may help in the transition towards a risk sensitive capital charge: the well-known partial use and gradual use.

### Partial Use

Partial use is the application of more than one capital computation methodology by an institution, such as TSA for some and AMA for other business units. This has always been an acknowledged path. An early ORIAG paper<sup>2</sup> noted that it may not be feasible for a bank to meet the AMA entry criteria for all business activities. Partial use would then provide the required flexibility, whilst at the same time ensuring a minimum standard for operational risk management through the TSA Qualitative Criteria. Other reasons to adopt partial use were home-host issues or significant change in the business, such as mergers / acquisitions or demergers / restructuring where it is not feasible to meet the AMA standards for all business activities.

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<sup>1</sup> The August 2011 issue of *Operational Risk and Regulation* (ORR) reported that Lloyds banking group has abandoned the AMA model because “it was simply not worth the effort” (see also note 4 below). The July 2011 issue of ORR noted the vibrant AMA ambitions of the Bank of Montreal (BMO) as an exceptional case. In general, the tendency is to shy away from AMA and opt for the simpler approaches.

<sup>2</sup> See e.g. *Implementation of the Capital Accord for Operational Risk*, ORIAG paper, January 2003, <http://www.globalriskguard.com/resources/oper/Top1.pdf>



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### Gradual use: AMA-light

That still leaves a massive gap between TSA and AMA. And yet there is a simple way to tackle this: namely founding the AMA model off the TSA outcomes. Rather than creating the model from the ground up (founded on some actuarial combination of loss data, business and control environment factors and scenario's), AMA-light would provide an unambiguous TSA starting point, adding loss data, business and control environment factors and scenario's over time to make the outcome more risk sensitive.

In many AMA approaches, comprehensive loss data is a prohibitive requirement which is nevertheless indispensable since that usually provides the loss distribution which is the foundation of the capital computation. Arriving at an acceptable capital charge at the given confidence level via internal and external loss data often has leads to making the loss data bend over backwards.<sup>3</sup> Relying on Scenario Analysis alone is equally hard<sup>4</sup> and is likewise open to challenge. Starting with the TSA as a benchmark, however, takes away these impediments. It provides an objective and ready-made capital number to depart from: not terribly risk sensitive or forward looking, but it gets us started.

From that starting point, we can immediately introduce some of the factors that do make AMA relevant: risk sensitiveness (loss history as well as business and control factors) and a forward looking element (scenario analysis). Depending on the maturity, we can add internal and external loss data, specific local scorecard data of some sort and (standard industry) scenario's.

### Issues

There are numerous issues surrounding AMA, and AMA-light is not the answer to all of them. Nevertheless, here are some of the issues where AMA-light would have a positive effect.

Issue	AMA-light effect
TSA is founded on mistaken assumptions made in the early days of Basel II.	TSA is likely to evolve, in terms of beta's, the regulatory business lines, the risk drivers and the computation. It will not go away. If anything a new set of TSA data will determine the new benchmark in the ORM capital debate.
Banks expect AMA to lead to lower capital charges. This is not guaranteed under AMA-light.	Allowing banks to opt for various approaches invites regulatory arbitrage. AMA-light in fact prevents that by introducing a bonus-malus system around an objective benchmark. Insurance, sound ORM and a proven loss record should ensure an appropriate capital charge for ORM.

<sup>3</sup> Note, however a simplification suggested by Tsuyoshi Nagafuji et al. which uses a generalised loss formula based on industry averages. Tsuyoshi Nagafuji et al., May 2011, *A Simple Formula for Operational Risk Capital: A Proposal Based on the Similarity of Loss Severity Distributions Observed among 18 Japanese Banks*.  
<http://www.fsa.go.jp/frtc/english/seika/perspectives/2011/20110520.pdf>

<sup>4</sup> See e.g. Emily Watchorn , Australian Prudential Regulation Authority, *Applying a Structured Approach to Operational Risk Scenario Analysis in Australia*, September 2007



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TSA is under revision	A revised TSA will probably lead to a higher capital charge under TSA. Regulators have always been wary of the fact that most AMA models 'magically' resulted capital figures just below or well below TSA, and will want to re-examine those AMA models once TSA is adjusted. AMA-light would incorporate that automatically without the need for a new charade of distributional smoke and mirrors.
AMA models are hard to validate	The hardest part of validating AMA models concerns the loss data <i>distribution</i> (models, parameters etc etc) since that drives the capital requirement. Under AMA-light validating the model inputs, model consistency and scenario usage is also not trivial but there is a significant difference between validating <i>adjustments</i> to the capital number and a bottom-up <i>calculation</i> .

### Conclusion

When AMA is discussed, the elephant in the room is that the capital numbers that are supposedly calculated using loss data, scenario's and control factors are in fact calibrated around the standardised approach, which, although neither particularly risk sensitive or forward looking has the distinct advantage of being simple and objective. By acknowledging this, we could turn this perceived weakness into a strength by developing the AMA models starting from this objective number, adding the AMA factors as they mature. AMA needs all the support it can get to become a practical way to measure and manage OpRisk and taking away the burden of developing it from the ground up may be the missing link that has kept AMA a research project for too long. The case of Lloyds is especially poignant, since AMA-light could have kept their AMA ambitions afloat and would thus contribute to a more risk aware and risk sensitive way of doing business.<sup>5</sup>

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<sup>5</sup> The 2010 annual report of Lloyds Banking Group, page 92 spells out the case for gradual use: "*Both Lloyds TSB and HBOS had operational risk Advanced Measurement Approach Waivers, granted by the FSA, enabling the use of an internal capital model for calculating regulatory capital. As part of its integration programme, Lloyds Banking Group is in the process of moving to The Standardised Approach (TSA) and, in anticipation of this, calculated regulatory capital for the year ended 31 December 2010 on the basis of TSA.*"

[http://www.lloydsbankinggroup.com/media/pdfs/investors/2010/2010\\_LBG\\_R&A.pdf](http://www.lloydsbankinggroup.com/media/pdfs/investors/2010/2010_LBG_R&A.pdf)