



## AMA: Desirable & Feasible for All Banks

### Summary

The efforts involved in embarking upon an AMA project should not be underestimated. In addition to significant data gathering exercises, extensive data cleansing and modelling expertise, it requires a lot of senior and line management support. The rewards, however, are also substantial from better internal control awareness to external reputational improvements. The good news is that, contrary to common opinion, AMA is within any bank's reach. Three misconceptions stand in the way of AMA for banks: misconceptions about modelling, misconceptions about loss data and misconceptions about the relation between day-to-day ORM and AMA.

### Dear reader,

Not many banks have made the plunge to apply for AMA. One reason is that, in many countries, the regulator is not yet allowing banks to use AMA for regulatory capital. But even in those cases, it actually makes a lot of sense for banks to adopt AMA for internal risk allocation. Not least because the alternatives (BIA or TSA)<sup>1</sup>, depend only on gross revenue and thus not only fail to be anywhere near risk sensitive but, more importantly, also fail to provide any incentive to line management to manage its operational risk.

In addition to the regulator's reluctance to allow AMA, banks are also slow on the uptake because there are misconceptions about what it takes to build an AMA model.

### Misconception 1: AMA models are fiendishly hard

This may be the most common misconception regarding AMA. Basel II is quite clear that internal loss data, external loss data, business and control environment factors, and finally scenario analysis must be applied to a level commensurate with a one year holding period and a 99.9<sup>th</sup> percentile confidence level.<sup>2</sup> When risk people see this, they automatically assume a loss curve of past and potential losses needs to be built. This has been the fatal flaw in the AMA story. A comprehensive ORM loss curve cannot be created for ORM, even allowing for external loss databases and scenario analysis.

So how have AMA banks done this? Not everybody is willing to own up to this, but the truth is that a lot of backward engineering is involved. Banks start out building a loss curve, by whatever means: internal and external loss data, scenarios, benchmarks etc. This loss curve is usually very sparsely filled when it comes to high impact losses, so some simulations are sometimes added to make up the numbers. Once the loss curve resembles a reasonable distribution, the big question is what the 'unexpected amount' is at a 99.99% confidence level. This can be spectacularly low or high depending on the data. Often it is very low. That is, of course unacceptable to regulators, who routinely will require a floor of, say, 90% of TSA. Sometimes it is very high indeed, which is unacceptable to banks. They will then typically calibrate the outcome to be in the range of TSA.

<sup>1</sup> BIA = Basic Indicator Approach. TSA = The Standardised Approach. Apparently, acronyms require three letters.

<sup>2</sup> See (2006), Basel Committee on Banking Supervision, *International Convergence of Capital Measurement and Capital Standards*. A Revised Framework. Paragraph 667. Nothing has been altered since 2006.



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Since there are many degrees of freedom, there are always sufficient options to make the curve fit the desired outcome. A more honest approach would be to acknowledge the supremacy of TSA by *starting* with the TSA outcome and using the four elements of AMA to deviate from that starting point. That way, we can safely assume that the outcome is in line with the 99.9% confidence level and the four data sources can be used to link the amount to real ORM data.<sup>3</sup>

### **Misconception 2: AMA is only attainable for large banks with lots of internal loss events**

Loss distributions require a range of observations, and the larger and more diversified the bank, the greater the likelihood that an actuarial model can be crafted. This is true for the overall capital model at the highest level, but in reality a lower unit of measure is required by regulators. And thus, large internationally active banks struggle with exactly the same modelling issues as less diversified banks since they will experience the same modelling issues as smaller banks once they get down to the BU level, country level or product level. A related misconception is that AMA requires reams and reams of internal loss data. Once we do away with the need to develop a full loss curve, loss data falls away as a cornerstone. Nowadays, banks that follow a full blown LDA are rare and most AMA banks follow a scenario based approach, focusing on hypothetical events.

### **Misconception 3: AMA is only about capital and not about the management of OpRisk**

The technical aspects of AMA (modelling, confidence levels, thresholds, validation, backtesting, and all the other aspects of a rigorous mathematical approach) require skills that are not common among ORM professionals. We often see a dedicated AMA-team of statisticians and modellers, often on temporary loan from a credit or Basel group within the bank, who design, test, validate and run the AMA model. This can lead to the idea that AMA is somehow separate from normal ORM.

In fact, AMA should go hand in hand with day to day ORM. AMA outcomes, as per the 'use-test', should be used in evaluating whether business are within the bank's risk appetite. Likewise, the ORM results should play a major role in the AMA calculation. In many banks, the ORM data play a minor role, which is one of the reasons why AMA often leads an anaemic existence outside the ORM scope. An alternative, such as the AMA light approach<sup>3</sup> takes care of this issue.

### **Conclusion**

AMA is within the reach of any bank. If we "begin with the end in mind" - which here translates as starting from TSA - then the modelling aspect is not the hard part. In fact, the largest obstacles are the soft qualifying criteria of sound OpRisk Management, which are all qualitative. Another challenge, if we can call it that, is that a meaningful capital charge for ORM must be tied to the Risk Appetite statement. That requires the operationalisation of Risk Appetite for ORM. This will be a major topic in 2014 that we can look forward to.

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<sup>3</sup> For much more on this topic, see newsletter 37, *AMA Light – Gradual Use* at <http://www.globalras.com/Topics/Nr%2037%20AMA-light%20Gradual%20Use.pdf>