

## Response to “Fundamental Review of the Trading Book”

By Real Assurance Risk Management

### Introduction

Real Assurance Risk Management has pleasure in submitting our response to the consultation. Being a tiny organization we are well aware our remarks are unlikely to carry much weight in the final consideration of the new rules. Nevertheless we have felt it may help the future debates to put on record our questioning of the fundamentals in the hope they may, one day, get onto the regulatory agenda.

The Fundamental Review of the Trading Book issued in May 2012 comes after the abject failure of Basel 2 in the crisis and the initial responses of Basel 2 ½ and Basel 3 which will ultimately, in a few years time, increase capital levels. The problem is that given the glacial timescale for the introduction of even Basel 3, the world is almost certain to be in another crisis, perhaps on an even bigger scale than the last, before the new rules are ever implemented in full. It is our bet that Basels 3½, 4, and maybe even 5 will be out for consultation years before the implementation of Basel 3. So is it therefore not time to perhaps reappraise the approach before the Basel Committee completely loses its credibility?

It is our view that the proposals in the “Fundamental Review of the Trading Book” are just “more of the same” and continue down the same path which failed the banking system so badly in the financial crisis. There is nothing “fundamental” in this current review and certain basic matters continue to be regarded as right without question. It is now high time the fundamentals were questioned. It is very timely that this ongoing path toward ever greater complexity is being increasingly questioned even by central bankers.<sup>1</sup>

Therefore in addition to responding to some of the relevant specific question put, we also ask that urgent attention is given to the following fundamental questions which have so far been avoided.

### Fundamental Question 1 – internal models and Pillar 1

**Are internal models appropriate *at all* for the calculation of regulatory capital? Indeed is Pillar 1 any longer fit for purpose?**

At the time of the introduction of Basel 2 and the extension of the internal model regime to credit risk and operational risk, it was clear that this was being done primarily to allow banks to *reduce their capital requirements compared to the standardized approach*. This is why banks spent so much money developing their internal models approaches.

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<sup>1</sup> “The Dog and The Frisbee” speech by Andrew Haldane, Financial Stability Director, Bank of England 31 August 2012 which has interesting empirical evidence that simple models in fact out perform complex ones.

However, standing back and looking at it from a distance, what was being done was the delegation of the risk assessment of the banking system into the hands of the banks themselves with the incentive they could save money by doing it! Was it a surprise that the banks began to come up with low levels of capital requirements. Of course the regulations took some account of this in the requirement for stress testing. But the way this was done with the “extreme but plausible” requirement was, from the first, destined to fail and indeed the banks’ own first stress tests were so mild (even those of the major institutions) as to be risible and the regulators expressed their “disappointment” with the results.

It should by now be abundantly clear that relying on complex models and self assessment of capital is bound to fail and it is time to say enough is enough. Indeed regulators worldwide have implicitly accepted that; from the time of the bankruptcy of Lehmans to the present, bank regulators have relied almost exclusively on regular stress tests to assess capital adequacy of countries’ banking systems. Whether the banks comply with Pillar 1 is all but ignored.

If it is the case that in extremis regulators ignore Pillar 1, surely one needs to question whether the whole complex superstructure of capital regulation is fit for purpose and could not be substituted in its entirety by independently supervised rigorous stress tests and particularly reverse stress tests.

#### *VAR and the probability fallacy*

The reason Basel has followed the industry and academic path down the VAR (and now the ES) route is easy to understand. There is merit in seeking to “calculate” a loss curve to ensure that the bank could withstand losses up to a specified probability within a specified time frame (VAR). This is the basis of economic capital and has given rise to a massive academic research effort devoted to calculating the curve.

This is all well and good except for one minor problem which is this. In a crisis it becomes clear that the frequency of “tail events” is many times more than the “calculated” value. In other words, *the risk to a bank is not that a rare event occurs in the tail of the distribution but that the whole distribution has actually moved to the right*. Many or most of the key model assumptions, especially the correlations and other relationships break down in stressed situations rendering the model non-applicable. During the height of the crisis in late 2008, it was observed that “one in one million year events seem to be happening every six months”. The management of the famed, failed, Long Term Capital Management assessed their own probability of failure at less than one in ten billion.

The conclusion to be drawn is deep and very disturbing: **it is not possible to make a meaningful assessment of the probability of catastrophic events**. It is pointless spending millions on statistical data models when by its very definition, a stressed event changes the rules of the game and makes all the statistics based on pre-crisis data valueless. The pretence that VAR and ES mean anything in relation to financial stability is the same as stating that there is a 10% chance of rain tomorrow or a 0.1% chance of an earthquake in San Francisco next year. Those figures do not mean anything but are simply a statement of the degree of belief of the individual – and one individual’s view is as good as another’s.

In any case, even for a medium sized investment bank with a portfolio of many thousands of open contracts involving hundreds or thousands of correlations and assumptions, and many valuation models for complex products, the output of the conventional VAR computations must be so questionable as to be almost valueless.

**If it is true (and it by now has surely been proven) that the models break down when you really need them, in a stressed situation, then it perfectly useless relying on them for the capital calculation.**

The standardized approaches follow the same idea. By setting assumed margins of movement and implicit correlations, they seek to achieve the same goal of ensuring the probability of loss of total capital in a year does not exceed one in one thousand years. The various ratios, weightings and multipliers are all similarly based on a review of historic conditions to achieve something “reasonable” and practical.

*What should be done – reverse stress testing – the macro approach*

As noted above, if it is known the models break down in a crisis because the relationships and correlations on which they are based are no longer in place then they are inappropriate for the calculation of stressed capital to allow a bank to survive a crisis. That is not to say that VAR and ES models have no place in operational management, they do. Indeed no trading operations could sensibly take place without them. But this is emphatically not to say that they are appropriate for the *capital* assessment and it is time the regulations recognized the difference between operational risk management and capital management.

So what should be the basis for the capital calculation? In our view it has to be reverse stress testing which unfortunately merits only a passing mention in bcbs155 and then only as a subsidiary technique in forward stress testing.

The reverse stress test generates extreme scenarios which put at risk the viability of the bank. Note that the viability of the bank (the going concern as opposed to the gone concern basis) is threatened long before *all* capital is burned. This is another problem with the Basel/economic capital approach. Assuming a bank is not viable if it breaches the 8% risk asset ratio limit, it is clear that banks’ real leverage is perhaps two or three times their simple leverage.

The reverse stress test, if done correctly, makes only the mildest generalized assumptions about the relationship between the risk factors and is not constrained by detailed models. The output is a variety of limiting scenarios. The point is that no attempt is made to calculate a (meaningless) “probability”. It is accepted instead that probability is fundamentally subjective and so the judgement as to the acceptability of the limiting scenarios becomes the definition of *risk appetite* and, on the assumption there are boards in place who are competent to make the judgement, this decision is made by the board and overseen by the regulators. The whole effort of capital assessment lies in the generation of the limiting scenarios of most concern and the judgement as to their acceptability. It is our view that this methodology which we termed “inverse risk logic” many years ago (because it goes in the opposite direction to a forward stress test) is the only practical, effective method for the capital calculation.

## **Fundamental Question 2 – proprietary trading**

**Should institutions which take deposits from the public actually be permitted engage in proprietary trading on their own account?**

Many countries are struggling with this question in the face of fierce resistance from the banks and Basel is well behind that curve. However the fact would need to be faced that even if there were statutory separation of banking and trading activities, the latter would still need capital regulation to serve the needs of financial stability. However, this would require general acceptance that non-bank financial market participants should be brought into a harmonized regulatory regime.

## **Fundamental Question 3 – board competence**

Given the tremendous position of responsibility assumed by boards, especially of large banks with highly complex market operations, do boards of directors of banks have the time and the competence to apply the requisite oversight? If regulation failed during the crisis, board oversight failed even more. At the present time, regulatory criteria do not require boards to contain a single person with any kind of professional banking risk qualification. One could ask why *all* members of bank boards should not be professionally qualified with a requirement for continuing education to stay current. The question as to whether or not the world has the right people overseeing the world's financial system needs to be made a number one priority.

## **Fundamental Question 4 – board governance and people risk**

Along with the competence issue, one can also ask whether the Anglo/US unitary board model is appropriate for banks given the dominance of the executive and the natural reluctance of boards to interfere in executive management before it has failed. After the crisis, the almost total ineffectuality of the boards of major institutions came out into the open. More recently, the trading losses at a number of institutions have again put the spotlight onto governance and it is clear that many banks appear to be in contravention of some of the most basic principles of good corporate governance. Executive chairmen, unqualified boards and risk committees, inappropriate reporting lines of auditors and chief risk officers are just some of the critical issues which remain unaddressed in spite of the crisis. In our view the key risks in a bank have little to do with the models being used and everything to do with the people running the institution and the degree of oversight exercised by the board. When questioned privately most people agree that **the biggest risk in a bank is the CEO** for whom there are no professional qualification requirements. Nor, perhaps as important, are there any requirements for an **assessment of psychological suitability** to be put in charge of billions of other people's money. The focus of regulation needs to move away from technical detail onto the largest threat to financial stability which is people risk and concentrate on implementing governance regimes which are able to apply effective supervision over the activities of the banks.

## **Fundamental Question 5 – exceptions**

Basel rules have contained many exceptions. These are put in to accommodate specific institutions or interest groups who argue their business will be unreasonably affected. The very first Basel 2 rules were subject to a QIS and then the various parameters set to ensure the basic capital requirements did not differ too much from the number first thought of as “about right”. Whilst it is important that capital rules do not have genuinely unintended consequences across the board or on significant sectors, this really needs to be balanced with a resolve to change behavior in the markets, even at the cost of individual entities’ returns.

In summary, therefore, the current proposals represent ongoing tinkering with a regulatory framework which has shown itself to be fundamentally flawed and these proposals do little to address that. **The Basel Committee needs to take more care to ensure it is not seen as operating in some kind of parallel universe of regulatory rulebooks with only a tenuous connection to reality.**

That having been said and with the knowledge that nothing is likely to be done in the medium term about the issues above mentioned, we have responded to some of the more relevant questions in the paper.

### **The questions**

#### **1. Which boundary option do you believe would best address the weaknesses identified with the current boundary, whilst meeting the Committee’s objectives?**

It seems clear that the regulation should agree with the accounting rules since it is the accounting rules which determine the quantity of capital available. In other words, any asset which is required to be marked to market (whether shown through the profit and loss account or “below the line” is irrelevant) should be subject to the market risk capital requirements.

An exception is proposed in respect of banking book hedges. We would oppose such an exception on the grounds that using a derivative to hedge a “held to maturity” instrument would still create fluctuating accounting profits and losses and could not in fact be said to be a hedge at all. The accounting rules recognize it and there is no good reason for capital regulation not to be in line. An alternative for the banks is simply to mark to market the banking book instruments and the hedge would be effective.

#### **2. What are commenters’ views on the likely operational constraints with the Committee’s proposed approach to capturing market liquidity risk and how might these be best overcome?**

We completely oppose the approach being proposed to capturing market liquidity. Per our initial comments about the effectiveness of any internal models, we suggest that market illiquidity is best examined as part of *effective* stress tests.

The point about asset liquidity in respect of market risk is not the time horizon but the sudden loss in value under stressed conditions, which seems to be considered. The proposal again confuses liquidity management with capital management which was well exemplified in Basel 2 by the inclusion of liquidity under Pillar 2 of the *capital* rules. This lesson seems still not to have been learned.

The proposed complex approach of “liquidity horizons” follows the well worn theme of over complexity and ineffectiveness. We would consider it practically and operationally unworkable.

### **3. What are commenters’ views on the proposed regime to strengthen the relationship between the standardised and internal models-based approaches?**

As noted above we believe both standardized and internal models approaches should be scrapped in favour of rigorous, independently supervised, regular forward and especially reverse stress tests. At the very least it is time to seriously consider whether internal models approaches should be permitted any longer. Their whole *raison d’être* in the first place was to permit banks to *lower* their requirements compared to the standardized approach because it was thought they were capable of accurately assessing their risks using statistical models. The crisis should have demonstrated conclusively that the approach is *fundamentally flawed*.

However, if Basel is to persist with this bottom up approach to capital assessment at least make it simple: ***all banks to take the largest daily movement in a ten year historic simulation and multiply by some regulatory multiplier.*** We propose that as a replacement for both the standardized and the internal models approaches. Of course one is still left with the valuation problem for most derivatives which is a fundamental problem with any attempt to build a loss curve. The increasing proportion of exotic derivatives in the portfolios of the major players, where valuation is purely model based, is surely reason enough to drop the approach. The value of an asset in the final analysis is the price at which a counterparty is prepared to settle an actual deal, not the output of a model.

### **4. What are commenters’ views on the Committee’s proposed desk-level approach to achieve a more granular model approval process, including the implementation of this approach for banking book risk positions? Are there alternative classifications that might deliver the same objective?**

### **5. What are commenters’ views on the merits of the “direct” and “indirect” approaches to deliver the Committee’s objectives of calibrating the framework to a period of significant financial stress?**

The next crisis will not be precisely the same as the last. Calibrating models against a previous crisis will always leave the regulators behind the curve. What will happen is that the investment banks will find new products which “calibrate” as lower risk (because they would have been less affected during the last crisis) and which in fact will build up very high levels of risk for the next crisis. This was the case with the notorious, toxic sub-prime CDO’s which were rated AAA and carried low capital requirements, even though they were not so complex that it was not possible to see their inherent risks.

The Basel Committee has to accept it cannot win this game with the investment banks who between them have many thousands of extremely well qualified people whose sole job is to dream up products to defeat the intention of the rules. The only hope to get any traction is to approach it top down at the macro level as we have suggested.

We would find it difficult to express in words any publishable comment on the “indirect” scaling up approach to ES calibration.

**6. What are commenters' views on the merits of the desk-based and risk-factor-based aggregation mechanisms to deliver the Committee's objectives of constraining diversification benefits?**

**7. How can regulators ensure robust supervision of integrated market and credit risk modelling? In particular, how would an integrated modelling approach affect other elements of the proposed framework (eg the choice of the quantile parameter for ES, the P&L attribution and backtesting processes, etc)?**

This just follows the same line of models of increasing complexity. Backtesting only validates a model against past data which is good for operational purposes but of no use for capital purposes for which only a macro, forward looking approach will suffice.

**8. What are the likely operational constraints with moving from VaR to ES, including any challenges in delivering robust backtesting, and how might these be best overcome?**

The operational constraints miss the point as explained above. ES is hardly a step forward if it is accepted that the true risk is not that events occur in the tail but that the whole curve moves to the right in a crisis. In any case, in a historic simulation over around two years of daily trading (say 500 data points) the VAR at 99% would be the 5<sup>th</sup> largest daily movement. The ES would be the average of the top 4 so where is the "fundamental" change? For a ten year dataset (say 5000 points) the ES is the average of the top 49 points and its "backtesting" is going to be all but meaningless, but has already given rise to complex statistical analysis.

**9. Which of the two approaches better meets the Committee's objectives for a revised standardised approach?**

Revising the standardized approach in the way suggested is again following the failed path. In addition, any changes are likely to have potentially huge associated systems costs out of all proportion to the benefits

**10. Do commenters propose any amendments to these approaches?**

As noted in our introduction, it is time seriously to question whether Pillar 1 in its entirety is actually fit for purpose. If that is a step too far, it should by now be abundantly clear that the internal models approach is most definitely not fit for purpose and should be dropped.

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