

SUBMISSION TO THE WALKER REVIEW (WR)

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PREAMBLE

We have assessed risk, primarily in regard to mortgage and mortgage related insurance portfolios, since 1988. From 2004, following the introduction of Basel II and the Capital Requirements Directive, we have visited and talked extensively with mortgage lenders concerning their businesses and have discussed in detail the stress and scenario testing services with which we could provide them, to support the management of their portfolios.

Our experience has been that lenders have found it difficult to include external advice and "specific input to the stress and scenario testing of a business strategy" (WR 6.20) into their procedures.

Andrew G. Haldane, Executive Director for Financial Stability of the Bank of England, wrote in his paper dated 13 February 2009 that the Bank and the FSA "engaged in some practical work with banks, running stress-tests through their models on common scenarios" and Mr Haldane concluded that "stress-testing was not being meaningfully used to manage risk. Rather, it was being used to manage regulation." Mr Haldane said that "Stress-testing was not so much regulatory arbitrage as regulatory camouflage" and we have felt that the capital requirement consequences that might arise from a third party stress test have acted as a possible deterrent to the use of our services.

SUBMISSION

We support WR Recommendation 25 and submit the following as examples of the work which a consultancy, such as ours, could contribute.

Specific Examples

1. Fat-tail shocks WR 6.21 states that "external advice ... will not provide any guarantee that a wholly unforeseen fat-tail shock will not exert a significant negative impact on the entity at some future point". We submit, however, that a specialist consultancy, such as ours, might, from its independent position, be able to identify one of "the unknown unknowns" and assess possible consequences" (WR 6.22).

(i) as an example, in 1988, we foresaw a probability that first time buyers would post their keys to the lenders as a result of, what we termed, 'loss of collateral' (the term negative equity not then having been coined) and calculated a possible forthcoming loss of £5 billion for the Mortgage Indemnity Insurance companies and lenders combined. This was an example of a "fat-tail shock" that was unforeseen within insurers, for which their MIG businesses were largely claims free. In fact, as shown in our "Mortgages in Shock" publication, claims totalled circa £10 billion in what is still the worst housing crisis to take place post war.

(ii) it is known that the favourable ratings accorded to many US sub-prime bonds by rating agencies were the result of stress testing at an average, or at a high segment, level rather than at loan level, and did not reveal the extent of the losses arising from outside a normal distribution. Our stress and scenario testing is conducted loan by loan such that the current value of the collateral underlying a loan, the current loan to value ratio, the probability of possession and the loss given possession, for each and every loan, is calculated under each of the macroeconomic scenarios chosen. "Fat-tail" losses are thus assessed.

2. Historic data Mr Andrew Haldane writes that "For financial time-series, small sample problems are even more acute, especially for events in the tail of the distribution." Our Academic Advisor, Dr Stephen Satchell, Fellow (Economics) Trinity College Cambridge, who developed our stress testing procedure, commented that "the models required under Basel II needed historic data on each and every exposure and this limited the historic data period used for modelling to 4 or 5 years and meant that there were many portfolios that had no recent, or indeed any, experience of default. Furthermore,

in the case of macroeconomic data, the matching period was extremely benign and the stress tests applied by most banks focused more on recent economic downturns rather than on the structural and market shifts we have experienced in the last 2 years." We note that, in Financial Risk Outlook 2007, the FSA said "A recent FSA review on stress testing found that, while good work was being done, some firms could be underestimating the probability of severe events. Firms should not overestimate their ability to take action in an effective and timely manner."

Acadameetrics holds a large default database emanating from the 1989-1991 housing crisis, which we use in our stress and scenario tests to supplement lender data, and make available to lenders e.g. to calibrate their own loss data.

3. Low probability high impact events WR 6.20 states that "the external advisor should be asked for specific input to the stress and scenario-testing of a business strategy addressing in particular whether the array of low probability, high impact events, taken into (internal) testing has been sufficiently widely drawn".

Our historic data under selected macroeconomic scenarios allows us to use our stress and scenario model to forecast losses, such as under the FSA scenario of a possible 50% house price drop and with 12% unemployment. The economists in our team and advisory panel include our Chairman Dr Peter Williams (Board member of the National Housing and Planning Advisory Unit), Gary Styles (past Chief Economist at HBOS) and Jim Cunningham (past Senior Economist at the Council of Mortgage Lenders), who can suggest events which board risk committees might wish to investigate.

OTHER ISSUES

4. Cost and speed Mr Haldane quotes bankers as saying that "a macro stress-test ... was conducted only annually as part of their Basel II preparations and ... would take months to conduct". Whilst our model currently handles only mortgage portfolios, once the data supplied accords with the required model input and has been cleaned, a test takes days not months to complete.

Furthermore, the cost per loan is much less than that of the widely used Automatic Valuation Models (AVMs), even though our stress tests include, as indicated above, a revaluation of each property to calculate current collateral and LTV; for this, we use the Land Registry house price data, which underpin our house price index FTHPI, published by the Financial Times since 2003.

5. Innovation If WR Recommendation 25 becomes part of regulatory guidance, we may expect to see an increase in the number of consultancies, such as Acadameetrics, offering specialist data and software services to lenders, beyond the normal scope of the large accountant consultancies. Such an expansion would contrast with the apparent withdrawal of some 5 specialist firms which we have noted over recent years.

Benefits of a healthy relationship between lenders and external firms include:

- *academic support:* we have worked closely with Dr Stephen Satchell for 20 years. Our academic advisory panel, headed by Dr Satchell, includes Professor Colin Lizieri (Department of Land Economy, University of Cambridge), who is expert concerning commercial loans, Professor John Knight, with experience in assessing reserving against mortgage default, and Dr George Christodoulakis, who initiated our FTHPI research. Our experience is that analytic skills, brought by top level academic intellectuals, can be of the utmost value in bringing fresh insights to those working within the commercial sector. We believe that other university staff, working on housing or housing related matters, would offer assistance to risk committees, were they encouraged to do so.
- *commercial experience:* the 'hands-on' understanding of the 1989-1991 housing crisis held within our company and within our academic and advisory panels provides the grounding for our risk advisory work and support for lenders teams, especially for any lacking past data and full past experience.
- *software:* external firms can be innovative in developing processes to support lenders; credit scoring techniques and AVMs are examples of past such developments. We, ourselves, are

currently working with a software house to develop a software platform, such as would enable the data sharing which we see as essential to the "through the cycle " modelling and for which the FSA is calling. Our UK Arrears and Possession Forecasting (UKAPF) is an econometric model, developed at Cambridge, to which Dr Satchell and Warapong Wongwachara are currently adding Bayesian techniques. UKAPF enables e.g. lenders to assess future arrears and possessions at national level for comparison with those anticipated for their own book. We share UKAPF results with Communities and Local Government and UKAPF examples how an independent firm, such as ours, can institute work at a world-leading university and make it available to the lending and housing sectors.

We would further submit that risk committees should have significant budgets adequate to enable them to commission work as they think fit, and that external advisors should be tasked to think widely concerning risks.

Finally, we would suggest that:

- much expertise is developed in the USA, where external advisory, software and support services thrive upon having close working relationships with lenders and others working in housing related matters.
- whilst extensive cooperation exists between lenders and external providers of e.g. survey and AVM valuations, effort needs to be made in the UK to foster the development of a wide pool of expertise for the sector.
- implementation of WR Recommendation 25 would be a very important first step.