Summary of FSA Guidelines

At the **FSA "Stress Testing Conference 27 September 2005"** (download here), one of the "Key challenges" specified was the "availability of accurate data in [a] stress test period". One item in the "Aggregation of risks discussion feedback" was that "firms lack credible internal data, so to come up with [a] reasonable picture of potential losses arising from operational risk, are pushed to examine judicious combinations of (stressed) loss distribution analyses and (stressed) judgemental scenarios".

FS05/2 (Feedback on DP05/2) December 2005 (download here), the FSA stated 3.3 "We will … not set specific scenario analyses for firms but will continue to use and develop scenarios for our own work (e.g. for our own planning as published in the [annual] Financial Risk Outlook)" (found on www.fsa.gov.uk). 3.11 "We will continue to challenge the appropriateness of stress tests undertaken by firms and will incorporate reviews of these tests into our ARROW risk assessment framework". 3.15 "firms should determine their own strategies for designing and developing stress testing methodologies relevant to the risk profile of their firm. Further guidance on the stress testing requirements of the CRD will be issued for consultation in the first quarter of 2006". 4.3 "The detailed implementation of the stress testing requirements of the CRD is uncertain. Despite this, we are fully expecting firms to make use of the period leading up to its implementation in 2007 to improve both the development of stress-testing methods relevant to their risk profiles and to embed stress testing more firmly into their risk-management frameworks".

FS05/2 drew the distinction between stress testing and scenario analysis. Thus, **Annex 1 Definition of stress testing**. "Stress testing typically refers to shifting the values of individual parameters that affect the financial position of a firm and determining the effect on the firm's business. Scenario analysis typically refers to a wider range of parameters being varied at the same time. Scenario analyses often examine the impact of catastrophic events on a firm's financial position, for example simultaneous movements in a number of risk categories affecting all of a firm's business operations – such as volumes, investment values and interest rate movements.

"Scenarios generally could also be considered under three broad categories. For example, changes to the firm's business plan, scenarios that involve changes in business cycles and those relating to extreme events. Firms can derive the scenarios in a variety of ways – by using stochastic models, analysing historic experience or repeating a historical event. Scenarios can be developed with varying degrees of precision and depth."

Annex 5 states "Good practice has stress testing forming an integral part of a firm's risk management framework. Senior management may decide to delegate the performance of stress testing to a firm's risk management department. However, they must be involved in determining the relevant stresses and have clear understanding of the implications of any outputs on the business."

CEBS GL03 January 2006 provided guidelines and explained **ICAAP** (Internal Capital Adequacy Assessment Process) in these terms "The ICAAP is codified in Article 123 of the CRD. Within the institution's internal governance framework, the ICAAP is a process to ensure that the management body (both supervisory and management functions):

- Adequately identify, measure, aggregate and monitor the institution's risks.
- Hold adequate internal capital in relation to the institution's risk profile.
- Use sound risk management systems and develop them further.

It is the responsibility of the institution to define and develop its ICAAP. The onus is on the institution to demonstrate, during its dialogue with its supervisor, that its internal capital assessment is comprehensive and adequate to the nature of risks posed by its business activities and its operating environment. The framework under which an institution should develop its ICAAP is designed to be risk based."

CP06/3 (download here) Chapter 7 **Economic cycle stress-testing** referred to "industry criticism" of CP05/3 proposals "that IRB firms carry out stress tests to determine what their capital requirements would be in a mild downturn" (7.88) "... focused largely on the requirement that where a deficit is indicated, firms must hold additional capital. The industry correctly stated that this went beyond the CRD, which requires a stress-test to be carried out, but is silent on the consequences." (7.89). In CP06/3, the FSA said "We think that, rather than a 'mild recession scenario plus automatic deficit add-on', an approach more closely tailored to the prudential concerns and management abilities of the individual firms is appropriate. In particular, on the basis that a key concern is firms' ability to survive a significant but plausible deterioration in economic circumstances - with their ability to meet their credit risk regulatory capital requirements intact - it is appropriate to take into account the negative effects of such a downturn, as well as clearly demonstrated offsetting factors which would be likely to reduce the adverse effect on a firm's regulatory capital ratio." (7.91) "Concerning the potential macro-economic cycle effects of the new framework …we propose not to make this aspect a basis of our rulemaking." (7.92)

CP06/3 continued with a "**Proposal** The central component of our revised proposal is to continue to ensure that firms are able to meet their credit risk requirements in an economic downturn." (7.93) and "We consider that this aspect falls naturally within the Pillar 2 process. We propose that firms carry out **stress-tests and scenario analyses** to establish the impact on their credit risk capital requirements of developments in the economic environment. This should address the impact …of the ratings migration that will occur throughout the cycle and, in particular, **during a significant deterioration in the economic climate, such as a 'one-in-25-year' type downturn**." (7.94 our emboldening)

CP06/3 Chapter 4 discussed firm's individual capital adequacy and Pillar 2: "The CRD contains many references to stress-testing. Generally, these prescribe particular stress-tests that provide information on a firm's exposure to particular risks or changes in regulatory requirements. These help form an overall view of the adequacy of financial resources, which we regard as part of the Pillar 2 assessment process. We have sought in the draft Handbook text to bring all relevant material together in the Pillar 2 chapters.” (4.12) “We also expect CEBS to consult soon on further guidance on stress-testing and Handbook guidance proposed in this CP reflects what we anticipate CEBS will publish.” (4.13) “**Pillar 2 stress-testing** We will require firms to carry out stress tests and scenario analyses for each major source of risk relevant to them. For more complex businesses, such analyses provide a useful means of checking the accuracy and reasonableness of complex models. Stress and scenario analyses are also the best means of evaluating how businesses react to economic recessions and industry cycles. We expect firms to have both plans and capital sufficient to survive a recession or business cycle. For firms whose business is relatively simple, stress and scenario analyses (‘what-if’ questions) are likely in themselves to be a satisfactory approach towards meeting ICAAP requirements.” (4.14)

CP06/3 “Relationship with other mandatory stress-tests” specified “there are several specific stress-tests or scenario analyses which certain firms must undertake”. (4.15) “Interest rate risk….is likely to be relevant to every firm, but it is of specific concern where it is not fully captured in the market risk capital requirement because a firm has exposure to interest rate risk in the non-trading book. It must form a specific element of all firms’ ICAAP and will be part of the SREP. We cannot exempt any CRD firm from the need to consider this risk. But we expect it to be more relevant to all banks and building societies…” (4.16) “We have exercised our discretion to determine the stress-test which the CRD requires all firms to undertake, in line with the guidance that we believe CEBS will soon publish. The shock is based on a 200 basis point parallel shift in the yield curve. This must be a two-way test that considers the effect of a shift both up and down. … Firms must notify us immediately if such a stress-test reveals their economic value declining as much as [20%], in addition to reporting it in their ICAAP (when requested) or in annual returns to us (where relevant). Firms should also consider the Integrated Regulatory Reporting CP and note that we will be consulting further in 2006 on revised proposals for reporting interest rate risk following feedback to our Discussion Paper DP05/1 published in February 2005.” (4.17) “Since we have set a broader principle that firms’ stress-testing should be in line with their own risk-appetite, and since we have not specified a particular regulatory confidence level, we are in addition open to ICAAP submissions which contain interest rate stress-tests at different levels of shock (and also shocks other than parallel movements in yield curves). Indeed, we expect firms with complex businesses to provide a range of results.” (4.18) “Procyclicality The CRD requires firms with approval to use the IRB approaches to carry out a stress-test on their credit risk capital requirement in an economic downturn. We discuss our proposed approach to this issue in paragraphs 7.88 to 7.101.” (4.19) … ”The credibility of a firm’s management plan to maintain its capital requirements compliance through a recession will be considered under the second stage of the SREP.” (4.20) “For the ICG to be dynamic and reflect future changes to a firm’s loan portfolio, this aspect of the guidance might be expressed as an element proportional to the firm’s credit risk capital requirements.” (4.21) “**Other stress-tests** We expect the CEBS paper on stress-testing to provide further guidance on other stress-tests the CRD requires, together with a useful summary of all references to stress–testing contained in the CRD. … senior management is expected to ensure that a comprehensive and appropriate programme of stress-testing is maintained.” (4.22)

BIPRU 4 (download here): The IRB Approach set out “Stress tests used in assessment of capital adequacy: A firm must have in place sound stress testing processes…” and “must regularly perform a credit risk stress test” … “The test to be employed must be meaningful and reasonably conservative. Stressed portfolios must contain the vast majority of a firm’s total exposures covered by the IRB approach.” (1) “The stress test must be designed to assess the firm’s ability to meet its capital requirements for credit risk under GENPRU 2.1 during all stages of the economic cycle and during an economic recession such as might be experienced once in 25 years.” (2) “In particular the stress test must address the impact …of changes in the credit quality of its credit risk counterparties including its protection providers.” (3) “The stress test must be carried out at least annually and also in the event of a significant change in the state of the economy.” (5) “A firm need not assume that the recession referred to in (2) will occur in the 12 months immediately following the stress test. Instead, the stress test must incorporate a plausible time horizon for the occurrence…” (6)

CEBS CP12 “Stress Testing under the Supervisory Review Process” (download here): “**Macroeconomic stress tests**” added “Under Annex V Paragraph 2 of the CRD, institutions should manage, monitor and mitigate the risks they are or might be exposed to, including those posed by the macroeconomic environment in which they operate…” (IV.1) and “in line with one of the CEBS’s High Level Principles listed in the CEBS Guidelines on the Supervisory Review Process (ICAAP 8) institutions should use stress testing as one (among others) tool to assess the risks in a forward looking manner.” (ST17)

CEBS CP12 said “…an institution should consider the effects of macroeconomic factors on its capital and whether it could affect its strategic plans. For instance, an institution may like to explore the effects an economic downturn will have on its portfolio and assess the impact on its current level of capital should it want to achieve its strategic objectives under such stressed conditions. If applicable, macroeconomic scenarios or stresses should be sufficiently granular to simulate each material risk the institution has previously identified as part of its internal capital assessment. Macroeconomic scenarios or stresses should be of a magnitude equivalent to an exceptional but plausible event.” (53)