IAFE Student Competition 2012

Capital Adequacy

In the aftermath of the financial crisis, the issues associated with capital adequacy have been brought into sharp focus by the public, the press, legislators, regulators, and even financial institutions themselves. There is no question that financial institutions require sufficient capital cushion so that unforeseen events and bank runs are not able to drive them into bankruptcy – the questions/debates center around how those cushions should be calculated and sized. In other words, how much capital is enough? Since capital is expensive (either in terms of the cost of capital or the profit lost if capital must be held in reserve and not deployed) financial institutions generally want to minimize their capital reserves (albeit while still being prudent). On the other hand, regulators generally want the capital reserves to be of sufficient size as to prevent a series of institutions from failing (commonly known as systemic risk). In addition, regulators do not want to risk public or legislative outrage over a perception that they have not safeguarded the system or "significant" institutions in the system. Regulators and the industry are now debating the features of capital adequacy embodied in Basel III. Basel III formulates the required capital cushion as a certain amount of equity capital relative to risk weighted assets (RWA).

I. Consider a fixed number of dollars= assets (A) to invest and many different projects, each of which is associated with a risk weight as well as return characteristics. If you were responsible for managing the firm, how would you allocate resources between business activities in the firm to maximize the return on A and still comply with the regulatory requirement of Basel III?

2. If you were the risk manager of the financial institution, how different could your optimal portfolio be from the portfolio found in 1?

3. If you were the regulator, how would you modify Basel III in the light of these results?

4. Now suppose you can borrow so that the overall leverage is endogenous. How does that change your answers to 1,2,3?

5. Discuss this problem from the perspective of the financial crisis of 2007-2009 and the European sovereign debt crisis of 2010-?