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I have been reading an interesting synopsis of Basel 3 this week. I noted this analytic of Basle III in relation to what asymptotix has been publishing about Ben Bernanke yesterday;

Monetary Policy Objectives and Tools in a Low-Inflation Environment [1]

The quotation which really hammers the Basel III point home (and I am sorry if I am spoiling your corn-flakes) goes like this (it is in relation to the Capital Conservation Buffer of Basel II);-

- **"Whilst no capital conservation buffer existed under Basel II, regulatory requirements under Basel III will require banks to retain a capital conservation buffer of 2.5% - as a means of "withstanding future periods of stress." As well as bringing the total common equity requirements to 7%, such a move "reinforces the stronger definition of capital agreed by Governors and Heads of Supervision in July and the higher capital requirements for trading, derivative and securitisation activities to be introduced at the end of 2011."**
- **"The capital conservation buffer is to "sit on top of Tier One capital."**
- **"Any bank whose capital ratio fails to retain the stipulated limit (which is in excess of the buffer),**

faces the threat of "restrictions" from supervisors on payouts which include dividends, share buy backs and bonuses."

The argument presented proceeds in its detail to get even more scary;-

"The purpose of the counter cyclical buffer is considered to be the achievement of "the broader macro prudential goal of protecting the banking sector from periods of excess aggregate credit growth." Further, the counter cyclical buffer is aimed at compelling banks to commence with build ups of such extra buffers .... As is the case with the capital conservation buffer, counter cyclical buffers did not exist under Basel II. Basel III imposes a requirement of a counter cyclical buffer within a range of 0% and 2.5% of common equity or "other fully loss absorbing capital will be implemented according to national circumstances."

I better reveal my source article;

[Basel III and responding to the recent Financial Crisis: progress made by the Basel Committee in relation to the need for increased bank] [2] capital and increased quality of loss absorbing capital
by Ojo, Marianne, Center for European Law and Politics, University of Bremen, Oxford Brookes

University. 

Every cent, i.e. every 0.000000000001% of common equity (note "common equity" none of your funny hybrids or CoCos are allowed anymore under B3) is critical to the financial institution but more critically its to the shareholders this matters.

Therefore precision estimation of the institutional exposure to that buffering is fundamental. Thus every quantitative tool you have in your bag of tricks is going to have to be deployed to get that right. It may seem utterly ridiculous but the management in charge of financial institutions is going to have to get real about estimating the business cycle and its implications for their risk appetite and risk profile. You cant do this in an excel spreadsheet.

Asymptotix has been indicating gently over the years how this challenge might be addressed should it come to pass. Well now that it has, here is a synopsis of what we have been saying.

Back in June 2009, asymptotix said

"it looks as though the "Dynamic Provisioning" (DP) approach or technique to the computation of Bank Capital in the context of Banking Supervision is gaining the ascendancy in the UK and Europe as a solution to ensuring banks hold sufficient reserves such that a credit crisis never occurs again. In reinforcing the tripartite arrangements to Banking Supervision and Regulation in the UK, the Chancellor appears to be favoring this approach which developed in Spain and it has to be said was successful (relatively). One challenge that Dynamic Provisioning gets around is the issue of procyclicality of capital buffers, perceived to be a problem with Basel II. In effect what DP does is to integrate Basel II Pillar One and Pillar Two by making total capital explicit and transparent over the business cycle. DP requires however an econometric model of the business cycle to drive the capital estimates predicated on outlooks for default (as a function of the business cycle). This is an interesting approach since finally an accounting standard is being putatively harnessed to an econometric technique."

The reference is Dynamic Provisioning & Bank Capital Integrity [3]

Other references from asymptotix, related to this argument, which you may find useful are;-

The Term Macroprudential - Origins And Evolution [4]
Ministers Of Finance Support Introduction Of Dynamic Provisioning [5]
Procyclicality And Financial Regulation [6]

Further asymptotix has made some technical references to the methodology or the set of techniques which you might consider should you wish to embark on a programme to implement this kind of approach. In an nutshell the methodological perspective is to integrate a Dynamic Stochastic General Equilibrium Model of the Business Cycle to a Factor Model of your financial institution's Risk Appetite and Financial Ratios and thus provide modelling of risk capital demand over the cycle. Here are our technical references;-

Testing a DSGE Model of the EU Using Indirect Inference

[7]

A method to incorporate information from Dynamic Stochastic General Equilibrium (DSGE) models into Dynamic Factor Analysis [8]

Over on my more technical blog on Analytic Bridge I have made reference to several important papers as blueprints of how to do this type of thing which maybe useful.

Evaluating and estimating a DSGE model of the UK [9]
How to traction the European Commission Structural Economic Model of the EU for Stress Testing [10]
Macroeconomic Models of the Euro area at the European Central Bank [11]
DSGE Model-Based Forecasting of Non-modelled Variables [12]
INFINITE-DIMENSIONAL VARS & Factor Models [13]

Finally as a general reference, here is Asymptotix summary, published on the Sunday of the announcement of the Basel III Capital Requirements specifications;-

Group of Governors and Heads of Supervision announces higher global minimum capital standards Basel III [14]

Back in 2008, hanging out on the Charles river myself (where Chairman Ben was at the beginning of this post) I treated myself to this book, I read it as an undergraduate and couldn't possibly have afforded to buy it then but I recommend it to you now, more than ever it is just as relevant today as it was then

Harvard University Press

[Modern Business Cycle Theory](#) [15]

[15]

Edited by Robert Barro

Thanks to my colleague Peter for stimulating me to articulate some ideas which I have no doubt he has been thinking about.

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