Frank Heid: *Capital requirements and macro-economic fluctuations*

BIS-Workshop

*Banking and Financial Stability*

Rome, March 20-21, 2003

Discussion by Gerald Krenn, Oesterreichische Nationalbank
Background

Capital charge: Strengthen the financial system on a micro-economic/static level.

Concerns: Are there destabilizing effects of capital charges when seen from a macro-economic/dynamic point of view?

Among the main concerns: Pro-cyclicality.
Pro-cyclicality

Central question: Do capital charges amplify the business cycle by influencing credit supply?

There is evidence that ratings fluctuate over the business cycle.

As Basel II increases risk-sensitivity of capital charges, also capital charges fluctuate over the business cycle.
Fluctuations in Basel II capital charges

These fluctuations are confirmed by several studies, e.g.
- Altman, Resti, Sironi (2002): BIS Working Paper No. 113
- Catarineu-Rabell et al. (to appear): Bank of England

\[ \text{Fluctuation(Standardized Approach)} < \text{Fluctuation(F-IRB)} < \text{Fluctuation(A-IRB)} \]

Often, already the fact that capital charges fluctuate over the business cycle, is termed “pro-cyclicality” of a capital charge regime
From fluctuations to pro-cyclicality

Main achievements of the paper:

- Assessment of how the changes of GDP growth themselves change when shifting to another regulatory capital regime

- A closed loop from real sector to financial sector back to real sector is presented, taking account of the regulatory capital regime
Possible additional scenarios

- The paper shows the effect of an economic upturn. What would be the amplifying effect on an economic downturn?

- In the calculation, the old risk weight function is used. What would be the results using the new corporate/SME risk weight functions?

- Are amplifications still significant when a shorter time horizon (2 years) is considered and/or $\alpha_y$ (sensitivity of regulatory capital ratio to GDP) is smaller due to estimation error?
The model

- In the model the driving force for the bank’s loan supply is the consideration of a capital ratio (shown to be compatible with data). What about other drivers?

- Single bank model

- In the VAR-model of the economy, corporate bond yields are used. Thus, for the pro-cyclicality scenario, the bond yield sensitivity is modified with the (theoretically derived) loan rate sensitivity.