

In this note we want to bring two issues to the committee's attention that have not been addressed in its latest proposals.

First, while counterparty risk is extensively addressed in the committee's proposals, the somewhat related topic of how to treat double default effects within the Internal Ratings Based (IRB) approach of Basel II is not discussed. Likewise, the academic literature on the topic is scarce. The IRB treatment of double default effects is based on the unpublished work of Heitfield and Barger (2003). A paper by Peter Grundke (2008) is concerned with the parameter choices of the model. While we think that the Heitfield and Barger approach indeed is an improvement to the substitution approach originally proposed in the 2003 document of Basel II, in a recent paper (Ebert and Lütkebohmert, 2009), we reveal some shortcomings of this approach. Our main criticism is that it relies on the assumption of additional correlation between obligors and guarantors. Thus, it fails to model their asymmetric dependence structure appropriately, that is, that the guarantor should suffer much more from the obligor's default triggering the guarantee payment than vice versa. The particular choice for the additional correlation parameter is the same for all obligors and guarantors and it remains entirely unclear how specific guarantor and obligor characteristics could be reflected in this parameter. Further, all guarantors are treated as distinct for different obligors and are assumed to be external to the portfolio. Thus, if there is direct exposure to guarantors or if several obligors have the same guarantor, then the additional dependencies and concentrations in the credit portfolio are ignored. Hence, also overly excessive contracting of the same guarantor is not reflected in the computation of economic capital. To overcome these deficiencies, we proposed a new alternative method to treat double default effects which addresses some of these shortcomings.

This is to bring these papers to the committee's attention and to prompt again higher interest in the IRB double default treatment in general. It is particularly important from a regulatory perspective as it sets an incentive for banks to hedge the risks in their credit portfolio. The committee might also consider to apply results detailed in the counterparty risk literature directly to the IRB treatment of double default effects.

Secondly, we want to raise interest within the committee on the granularity adjustment (GA). The computation of value-at-risk according to the IRB approach is based on the Asymptotic Single Risk Factor (ASRF) model. Real portfolios are, of course, not infinitely fine-grained as assumed in the latter model. The GA offers a way to quantify this name concentration risk inherent in the portfolio. Its application thus leads to capital requirements that more closely reflect the actual risk of the credit portfolio under the assumptions of the IRB approach.

The GA was not included in the original version of Basel II. The committee should note that meanwhile extensive progress has been made on the topic. Numerous researchers made contributions, notably Michal Gordy, Tom Wilde, Richard Martin, Susanne Emmer, Dirk Tasche and Eva Lütkebohmert. Gordy and Lütkebohmert (2007) revised the GA originally proposed in CP2 and calibrated it to the IRB inputs. This, and its analytical nature, make its application particularly simple. In Ebert and Lütkebohmert (2009) we present a method to incorporate also double default effects within this GA.

Thus, given this progress in understanding the GA, the Committee might consider to decide on a binding agreement in the near future, and on possible inclusion of the GA under Pillar 1 of the framework.

References:

S. Ebert and E. Lütkebohmert (2009): "Treatment of double default effects within the granularity adjustment for Basel II." Bonn Econ Papers No. 10/2009.

S. Ebert and E. Lütkebohmert (2009): „Improved modeling of double default effects in Basel II – An endogeneous asset drop model without additional correlation." Bonn Econ Papers No.24/2009.

M. Gordy and E. Lütkebohmert (2007): "Granularity adjustment for Basel II.", Deutsche Bundesbank, Discussion Paper Series "Banking and Financial Studies" 01/2007.

Peter Grundke (2008): "Regulatory treatment of the double default effect under the New Basel Accord: how conservative is it?" Review of Managerial Science 2, 37-59.

E. Heitfield and N. Barger (2003): "Treatment of double-default and double-recovery effects for hedged exposures under Pillar I of the proposed New Basel Accord." White Paper by the Staff of the Board of Governors of the Federal Reserve System.