Comment on
"Some Evidence on the Consistency of Banks' Internal Credit Ratings"
by Mark Carey

Philip Lowe
Bank for International Settlements

I very much enjoyed reading this paper.

The basic message that I took away was that by and large different banks rate a given borrower in pretty much the same way. While we do see differences, on the whole at least to my eye these differences are generally small. I therefore read the paper as basically good news for the New Basel Capital Accord.

If we want to worry about any of the results in this paper we might be concerned that when differences exist they tend to be for the poorer quality credits where a difference of one ratings grade has a bigger effect on capital. But all in all there is not as much to worry about here as I thought there might have been.

I have no substantive criticisms of the paper. The dataset is innovative. Mark is well aware of its limitations and these are discussed nicely in the paper. And the interpretation of the results is more than reasonable.

Therefore, in my comments, what I would like to do is to focus on two issues that mean that while Mark's paper should give us considerable comfort, we should not yet sleep perfectly at night! The first issue is the existence of evidence that could be seen as conflicting. And the second is the question of how ratings systems can be verified by supervisory authorities.

Conflicting evidence

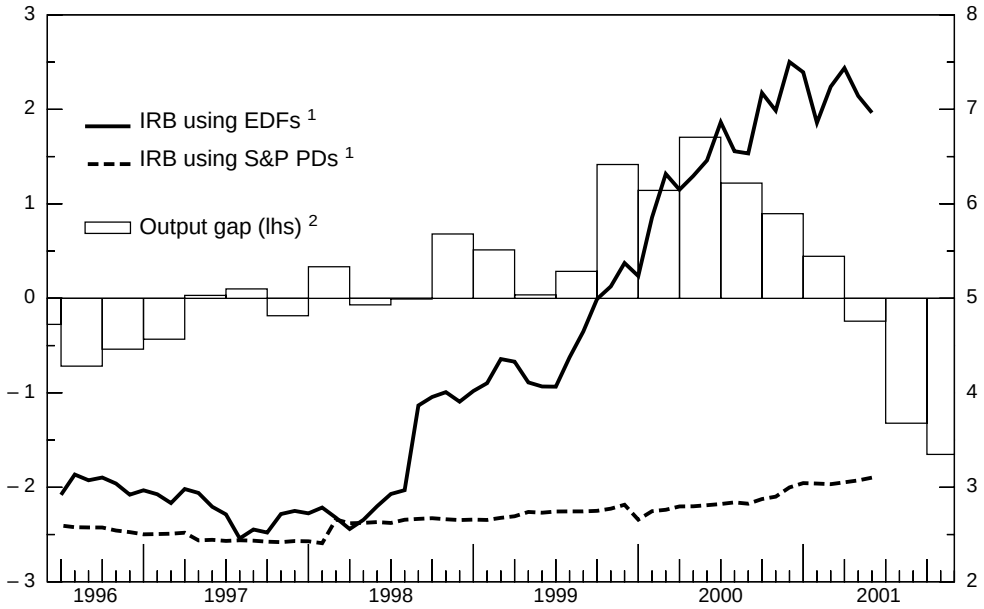
I would like to show two pieces of evidence that could be seen as conflicting. The first is from Jordan, Peek and Rosengren (2002). These authors track the ratings of a portfolio of syndicated loans in the US and then calculate what the capital requirement would have been under the proposed Foundation IRB approach (using the January 2001 proposals). They do this is two ways. The first assumes that a bank holding this portfolio of loans uses external credit ratings (from Standard and Poor's)

as the basis for its internal ratings. The second assumes that the bank assigns loans to ratings classes based on KMV EDFs.

The results are shown in Figure 1.

Figure 1

Capital ratio using EDF and S&P rating PDs for the probability of default



[1] Right hand scale. [2] Left hand scale. HP filter applied (BIS).

Source: Jordan, Peek and Rosengren (2002), Figure 1.

Two points stand out. The first is that the two ratings systems have very different cyclical properties. The capital requirement derived from the EDF based rating system increases when the US economy is still growing strongly, while the capital requirement derived from S&P ratings increases considerably later. The second is that the two ratings systems produce very different levels of capital. For example, at end 2000 if the bank were using the S&P ratings the capital requirement would have been around 3%, while if it were using KMV EDF's it would have been more than double at 7%

The Basel Committee is not prescriptive about the type of ratings systems that a bank should use, although it does set down some minimum requirements. While the banks that supplied data for Mark's paper appear to be using the same type of ratings system, in principle they need not. Jordan et al's work suggests that if different ratings systems are used, significant differences in the regulatory capital requirements across banks (on a given portfolio) could emerge. These different

outcomes could all be “correct”, in that they are derived from risk measurement systems that are attempting to measure different things.

The second piece of conflicting evidence comes from Mexican data and is from a paper by Segoviano and Lowe (2002). This paper uses the internal ratings assigned by Mexican banks to business borrowers over the second half of the 1990s. All banks were required by the supervisory authorities to rate borrowers according to a 5-point scale set out by the regulatory authorities. So at least in principle, all banks should be using the same ratings criteria. As a result, one might have expected that that the average ex poste default frequency over a 5 year period for a given ratings grade should be pretty much the same across banks. This is not the case, with average default rates for some grades differing by more than a couple of percentage points across banks.

Neither of these pieces of evidence invalidates Mark’s work. Instead they simply suggest that differences in ratings systems, and different applications of a given ratings system, *can* yield quite large differences in capital requirements. Whether or not they will once capital requirements are explicity linked to these ratings, only time will tell.

Validation

The second issue is the very practical one of how the supervisory community is going to verify that ratings system are being used appropriately. This is likely to prove a difficult task. At a minimum authorities need to assess at least two basic characteristics of ratings systems.

The first is whether ex post default frequencies are higher for low quality grades than they are for high quality grades. This is the type of evidence that rating agencies typically like to present to show that their ratings have meaning.

The second, and much more difficult to assess, is whether *average* ex post default frequencies for a given grade are sufficiently close to the ex ante PD associated with that grade. Clearly, one should not expect that default frequencies and PDs equal one another each year. Indeed the very reason that banks hold capital is that unexpected events can occur. But over relatively long periods of time default

frequencies and PDs should line up. An important issue is over what time period we should expect this equivalence to hold? Another is how are we going to measure whether a given difference is within tolerable limits?

This issue of verification is important in ensuring that banks do not game the New Capital Accord. In particular, supervisors will need to ensure that banks that are in trouble do not use their rating system to hide the extent of the difficulties. If I read Mark's paper correctly then there seems little support for the idea that some banks are systematically more optimistic in their ratings than others. But the period he examines is a relatively benign one in terms of credit losses. I wonder what will happen in a serious downturn. Will banks under pressure decide not to downgrade borrowers because a decision to downgrade would mean a higher capital requirement? Will a supervisor be able to detect such behavior? And will supervisors wish to detect such behaviour, given that ratings downgrades may require the supervisor to take regulatory action that it might prefer not to take?

I have no answers here, other than to note that this validation question is going to be very important for both supervisors and the markets. Reflecting this, it is an issue that the Research Task Force of the Basel Committee is currently examining.

In conclusion, let me recommend that if you have not already read Mark's paper then you do so!

REFERENCES

Jordan, J, J Peek and E Rosengren (2002): "Credit Risk Modeling and the Cyclicality of Capital", Federal Reserve Bank of Boston, paper prepared by a conference on *Changes in Risk through Time: Measurement and Policy Options*, BIS, Basel, 6 March 2002.

Segoviano M A and P Lowe (2002): "Internal Ratings, the Business Cycle and Capital Requirements: Some Evidence from an Emerging Market Economy", paper presented at conference on *The Impact of Economic Slowdowns on Financial Institutions and their Regulators*, Federal Reserve Bank of Boston, April 17-19.