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Addendum 2 to the CRI Technical Report, (Version: 2011, Update 1)

Change to calibration groups and benchmark interest rate input variable

This write-up serves as an update to the Technical Report (Version: 2011, Update 1) and documents the changes to the calibration grouping and the benchmark interest rate input variable that have been implemented as of the December 2011 calibration.

The Credit Research Initiative database contains credit events of over 4,000 firms from 1990 to the present. The default events come from numerous sources, including Bloomberg, Compustat, CRSP, Moody's reports, TEJ, exchange web sites and news sources. As indicated in the Technical Report, an important challenge in identifying default events is linked to the fact that definitions of credit default can vary across jurisdictions and between data sources. For the operational implementation of the CRI system, it is necessary to apply the default definition consistently across the different economies that are covered by the CRI. In our continuous efforts to normalize to a common set of definitions, the following definition is used as of the December 2011 calibration:

However, by having separate calibrations for different economies, the probabilities of default (PD) may not be directly comparable between economies. For example, suppose company A in calibration group Western Europe 1 and company B in Western Europe 2 have the same financial variables. By virtue of the fact that the available set of default events in Western Europe 1 is proportionally much smaller than the available set of default events in Western Europe 2, company A will have a considerably lower PD.

To enable direct comparisons of companies in different economies, the calibration groups have been changed to include more economies together. Starting from the December 2011 calibration, all sixteen of the European countries covered by the CRI are in a single calibration group, Canada and the US remain in the same calibration group, and the developed economies of Asia-Pacific (Australia, Hong Kong, Japan, Singapore, South Korea and Taiwan) form another calibration group. The emerging economies of Asia-Pacific remain in their current calibration group or single economies until further research can be conducted later to arrive at better groupings. In addition, we foresee that many more emerging economies from the rest of the world will need to be added to this group as the CRI expands its coverage.

All economies in these new calibrations groups share the same coefficients for all variables except for the benchmark risk-free interest rate variable. The benchmark interest rate's coefficients will be allowed to vary, because different economies based in different currencies naturally have different dependencies on their interest rates, and the interest rate levels can differ significantly across economies. After adopting the Euro, all Eurozone countries use Germany's three-month Bubill rate as this is better reflective of monetary rather than sovereign credit conditions in each economy, which is the intent of this variable. For the period before joining the Eurozone, their own interest rates are used.

In addition, the benchmark interest rate is entered as the current value minus the historical month-end mean. This allows the variable to reflect its value relative to the historical average. When an economy does not have enough default events to identify a separate interest rate coefficient, the interest rate variable will be disabled for that economy by inputting a zero value for the whole time series. In fact, that is also why we de-mean all interest rate series so that setting the interest rate series of a particular economy to zero, when necessary, does not induce a bias by the base economy in the same group.

Since all Eurozone countries except Germany do not have enough default events prior to joining the Eurozone, their benchmark interest rate is entered as zero for that period.

Among the non-Eurozone members of the European group, Denmark, Norway, Sweden and the UK each have separate coefficients for the benchmark interest rate. Switzerland and Iceland do not use this variable for their whole history.

In the Developed Asia-Pacific group, all economies have their own coefficient for the benchmark interest rate.

For the North American group, both Canada and the US have their own coefficient for the benchmark interest rate.

China, India, Indonesia, Malaysia, Philippines and Thailand continue to use their benchmark interest rates rather than the de-meaned version until further research is conducted.