

DBRS

Estimating Long-term Risk using Short-term Data

A credit rating agency provides credit rating opinions as to the probability a bond issuer will default on its debt obligations. A significant area of activity is Project Finance Bonds, where the source of debt repayment comes from a specialized, single project rather than a corporation or diversified business.

While many Project Finance transactions have contracted and hence predictable cash flows, a significant minority rely on variables such as wind speeds or energy prices. The credit rating process requires long term estimates of these variables because an investment grade rating typically considers a less than 1% probability of default. In other words, a default is expected to be observed once for every one hundred observation years. However, observations periods of the behavior of key variables are typically in the 20 to 35 year range.

The question faced by the rating agency is: with a short-term observation period, can reasonable estimates be made for the behavior of natural or economic variables at extremes beyond observed experience?

A related question is: can longer observation periods or similar and related (but obviously not perfectly correlated) variables improves the estimates of the behavior at the extremes?

Data will be supplied that relates to actual projects, including data series not relating to projects but with long observation periods in order to test proposed approaches.