2011-04-08

# PRESS RELEASE

**Development of a financial health indicator based on companies' annual accounts**

*by David Vivet*

NBB Working Paper No 213 - Document Series

This document describes the development of a financial health indicator based on Belgian companies' annual accounts. This indicator is designed as a weighted combination of variables, created by means of a model constructed in the same way as a failure prediction model. The model takes the form of a logistic regression discriminating between failing and non-failing companies. The definition of failure is based on a legal criterion, namely that a company is considered to have failed if it has faced bankruptcy or judicial administration in the past.

The indicator summarises each company's situation in a single value which takes account simultaneously of the solvency, liquidity and profitability dimensions. Those dimensions are complementary in the establishment of a financial diagnosis, as a high debt level, for example, may be offset by a plentiful cash flow, and vice versa. The indicator also takes account of the companies' age and size, particularly through interaction variables.

The indicator constitutes a strictly financial assessment of the companies at a given moment. That assessment is based on data from the annual accounts, and therefore disregards any other fundamental elements, such as development prospects, competition, management calibre or shareholders' willingness to provide financial support. In that respect, it must be regarded as one of the factors enabling an overall appraisal of a firm's situation.

In order to ensure that the results met a minimum standard of reliability, the indicator is calculated for companies satisfying the following conditions:
- passing the logical and arithmetical checks done by the Central Balance Sheet Office;
- balance sheet total of €50,000 or more;
- 12-month financial year;
- legal form: public limited company, private limited company or cooperative society;
- conditions regarding content: current assets, total debts and short-term debts larger than zero.

The population thus defined contains over 200,000 observations for recent financial years (225,000 in 2008). It is significantly larger than the populations examined in most comparable studies. The model nevertheless obtains very satisfactory and stable performances.

The model presented in the third part replaces the previous model developed by the Bank. Compared to this last, there are several ameliorations. First, the new model covers a population which is more than two times larger. Second, in order to select the most relevant variables, particular attention was paid to data exploration.

The model presented in this document is meant for external users and is aimed at summarising the situation of each company in one single value, i.e. the financial health indicator. In that respect, the group of companies in a bankruptcy or judicial administration situation is regarded as a benchmark for a weakened financial situation.

On the basis of the indicator, ten financial health classes were defined. These classes gather companies in groups which are homogeneous and stable in terms of failure rate at 3 years observed in the past. Each class is thus associated with a different risk level. The financial health classes are to be used in the enterprise files compiled by the Central Balance Sheet Office. These files are designed for the purpose of comparing the financial situation of a firm with that of firms in the same branch of activity.