# Standard failure score



# Presentation & code of conduct

# ellispher9

# **FAILURE SCORE**

Ellisphere has built a default score for French companies.

The aim is to determine if a company will go bankrupt in the next 12 months\*.

Our clients can therefore know whether a B2B supplier or a customer has a high probability of default in the short term.



# WHY A FAILURE SCORE?



Let's take the example of a company selling forklift.

Let's say the company sells its forklift for €10,000 and buys it for €8,000. Then, the gross sales margin is €2,000.

If your customer orders a forklift from you (supplier), and goes bankrupt then, he won't pay you.

You will have lost €8,000, and you will need 4 additional sales just to recover from this loss.





Consider another example. You manufacture and sell aluminum alloy parts.

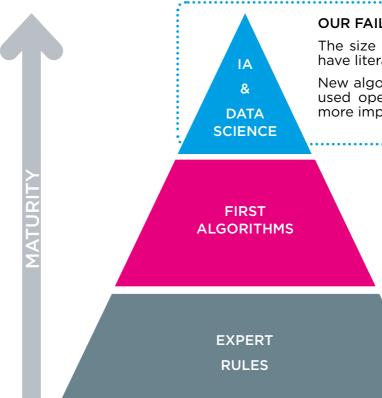
You buy aluminum from a single supplier.

If your supplier goes bankrupt, you will no longer be able to manufacture your parts, and no longer be able sell them. You will also go bankrupt.

# SCORE BUILDING

## THE DIFFERENT MODELS

There are different score models depending on the maturity of the company.

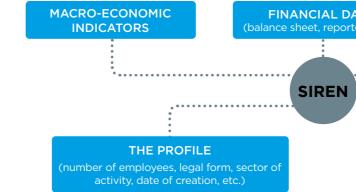


# **HOW DOES THE MODEL WORK?**

The objective is to solve the opposite mathematical equation. is a function that manages to best explain the observed Y(the failure):

# DATA USED IN OUR MODEL





# **RISKS OVER LONGER HORIZONS**

Your commitment to your supplier/customer may last longer than a year.

For example, you finance leases over 5-year terms. Your contract of trust on your supplier extends over 3 years.

We have built failure scores over longer time horizons: 2 years, 3 years and 5 years.

So we measure the risk over these longer periods, « I can fail in more than 1 year but in less than 5 years ».

\* We also have 2 years, 3 years, 5 years default scores.



### OUR FAILURE SCORE The size of the databases and the computing capacities have literally exploded. New algorithms have been developed and are now being used operationally. The quality of the models may be more important than the full explanatory power.

The databases are structured and easily searchable. They are medium-sized databases.

The results of these algorithms are fully explainable.

The model is designed by rules developed by experts.

 $\hat{Y}$  is a probability (value between 0 and 1) of having correctly identified the failure.

<b>ATA</b> ted sales)	<b>PAYMENT EXPERIENCES</b> (unpaid bills or tax obligations,)							
	••••••							
	•							
	LEGAL EVENTS safeguard procedure, number of establishment closures, etc.)							

# **SCORE NOTES**

The score provides a probability of default at a 12-month horizon. We aggregate the proximity probabilities to obtain a score:

Risk class	Very high		High / Medium		Medium / Low		Low / None			
Grade	1	2	3	4	5	6	7	8	9	10
Probability	≥ 0,2	≥ 0,063 < 0,2	≥ 0,036 < 0,063	≥ 0,019 < 0,036	≥ 0,0099 > 0,019	≥ 0,0045 > 0,0099	≥ 0,0017 > 0,0045	≥ 0,0008 > 0,0017	≥ 0,0004 > 0,0008	< 0,0004
% of companies	0,1%	3,4%	3,0%	3,7%	4,8%	10,8%	25,2%	21,3%	27,3%	0,4%
Expected default rate over one year	25%	10%	4%	2%	1,3%	0,7%	0,4%	0,15%	0,05%	0,02%

Nota Bene : The Ellisphere score is not a credit rating, as defined in the Regulation (EC) nº 1060/2009.

# **SCORE UPDATES**

A company's score is updated regularly.



#### If an indicator used in the score has changed.

- New reports received;
- New payment incidents;
- Change of legal form.



#### If a significant legal event or judgment occurs.

- Legal redress, compulsory liquidation, cessation of activity, ...
- Recovery Plan;
- Transition from one state to another.



If the last available balance sheet is older than 30 months.



At least once every 12 months.

No analysis since 3 months

is **300,000 €**.

# **COMMENTS**



The evolution of a score also leads to a commentary, called evolution.

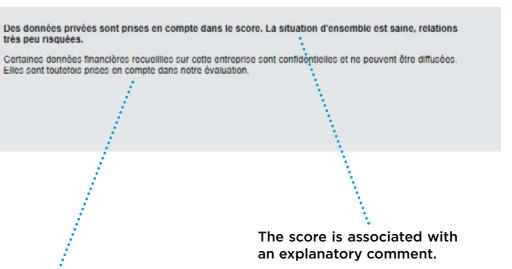


# DIT ADVICE

fer a recommended credit advice: average monthly nding amounts, adapted to the business volumes usually ged between the company and its suppliers.

rmula for calculating this outstanding amount is based on nount of annual purchases made by the company in a year. The calculated credit opinion is then weighted by the probability of default of Ellisphere's standard 1-year score.

As standard, the maximum credit advice calculated by Ellisphere



## **ELLISPHERE'S COMMITMENTS**

Ellisphere is committed to:

- having a transparent methodology; it is available on our websites;
- maintaining the objectivity of its methodology: it is rigorous, systematic and validated by historical experience. Assessments are subject to regular monitoring to ensure its performance and robustness over time;
- guaranteeing the quality, completeness and permanent update of data feeding its database;
- guaranteeing the independence of the production process of its score, which, being automatic, is free from any political and/or economic pressure;
- providing broad access to the Ellisphere score, available on subscription via our various services and web services.

# **CODE OF CONDUCT FOR THE ELLISPHERE SCORE**

#### Preambule

This code of conduct is available to the public, on a free access, on the website www.ellisphere.com. It describes the general framework within which Ellisphere operates its scoring activity.

Its provisions have no contractual nature and do not establish any legal link between Ellisphere and third parties.

Ellisphere is committed to complying with the provisions of this code.

#### **Quality of the scoring process**

Ellisphere has implemented and complies with procedures guaranteeing that the scores issued are based on a rigorous processing of all data, public or confidential, available or not (when they should) in its database.

As a matter of fact, in some cases, the absence of information is information in itself. Example: no annual accounts from a company required to file them to the Business Register.

The use and retention of these data strictly comply with current legislation.

Ellisphere's scoring methodology is rigorous and systematic; its quality may be subject to an objective validation, based on a statistical and historical performance assessment.

Ellisphere ensures the traceability of all elements justifying the scores it issues.

#### Independence and avoidance of conflicts of interests

The score is automatic; it can be influenced by objective factors only, without any kind of pressure, and regardless of relations of all kind, existing or that could exist between Ellisphere, the assessed entity and the user of the score.

The Ellisphere score is automatically updated when new information, taken into account by the calculation algorithms, is loaded into the database, whatever the potential (economic, political or other) consequences for Ellisphere, the assessed entity or any other third party.

#### **Transparency and distribution of scores**

The Ellisphere score is provided, free of charge, to each assessed entity requesting it through the <u>Transparency Charter</u>.

The methodology used, the scores' meaning and all definitions necessary for a sound understanding are distributed to customers and users in order to avoid any in-appropriate interpretation or use.

It includes, among other things, the meaning of each class of risk, the default definition and the time horizon considered for the automatic score calculation.

Since the confidence of score users is based on their knowledge of the duly published methodologies, practices and processes, Ellisphere is committed to disclosing each significant evolution likely to affect them. Whenever possible, it will be disclosed before its effective implementation.

The Ellisphere score is available on subscription, via the different services distributed by Ellisphere.

In order to enable users to assess the reliability of its scores, Ellisphere makes available the historical default rates per risk class as well as their changes over time. This is in order to clarify the historical performance of each risk class and its evolution.

#### **Processing of confidential information**

Confidential information obtained by Ellisphere can only be used for its scoring activity, enquiries and analyses, or for aggregates calculation.

Ellisphere is committed to giving access to confidential information only to its employees having to know them.

To this purpose, a confidentiality agreement is available on demand.

These obligations and restrictions will not apply to information and documents:

- · already available from public sources,
- · disclosed later by public sources.

As provided in Ellisphere's internal rules, respect for the confidentiality of information is required from all Ellisphere's employees, who must to behave in a fairly manner in all circumstances.

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