



Technical Assistance and Advisory Services
Macro Finance 2.0 Project

Corporate & Sector Risk Modeling

Who we are?

- **TAC ECONOMICS** is a fully independent European research group providing advisory services on international economic and financial issues for financial investors and industrial companies.
- **MACRO FINANCE 2.0 Project** - Since the 1990's, TAC has established a strong reputation built on praised economic and financial expertise and the ability to design and calibrate powerful quantitative instruments and artificial intelligence models for its customers, especially in country, sector and corporate risk analysis.



Corporate & Sector Risk Modeling

TAC ECONOMICS supports financial investors in strengthening their portfolio allocation process by developing and implementing powerful corporate/sector risk rating to complement country risk approach.

We have developed a quantitative methodology pertaining on corporate and sectoral risks which delivered strong quality performances :

- (1) Developing in-depth models to predict corporate failures in France using machine learning techniques
- (2) Supporting a bank in modernizing their sectoral rating models for more than 40 sectors in France and in the World.



Corporate & Sector Risk Modeling

Quantitative Methodology

S1 – Objectives and Scope

- Definition of the target variable (corporate spread, agency ratings, corporate failure etc.)
- Definition of the sectors/countries
- Definition of the time horizon
- Definition of reliable indicators and data sources

S2 – API / Data

- Automatized database construction via connectors (Datastream, OECD, World Bank, IMF etc.)
- Creation of an API, fully securized (tokens, logs, access) connected to the database
- Calculation of reliable indicators

S3 – Models

- SNOUT/SPIN approach: statistical calibration using econometric and/or machine learning techniques (cf next slide)
- Performance tests (cross validation etc.)
- Models validation

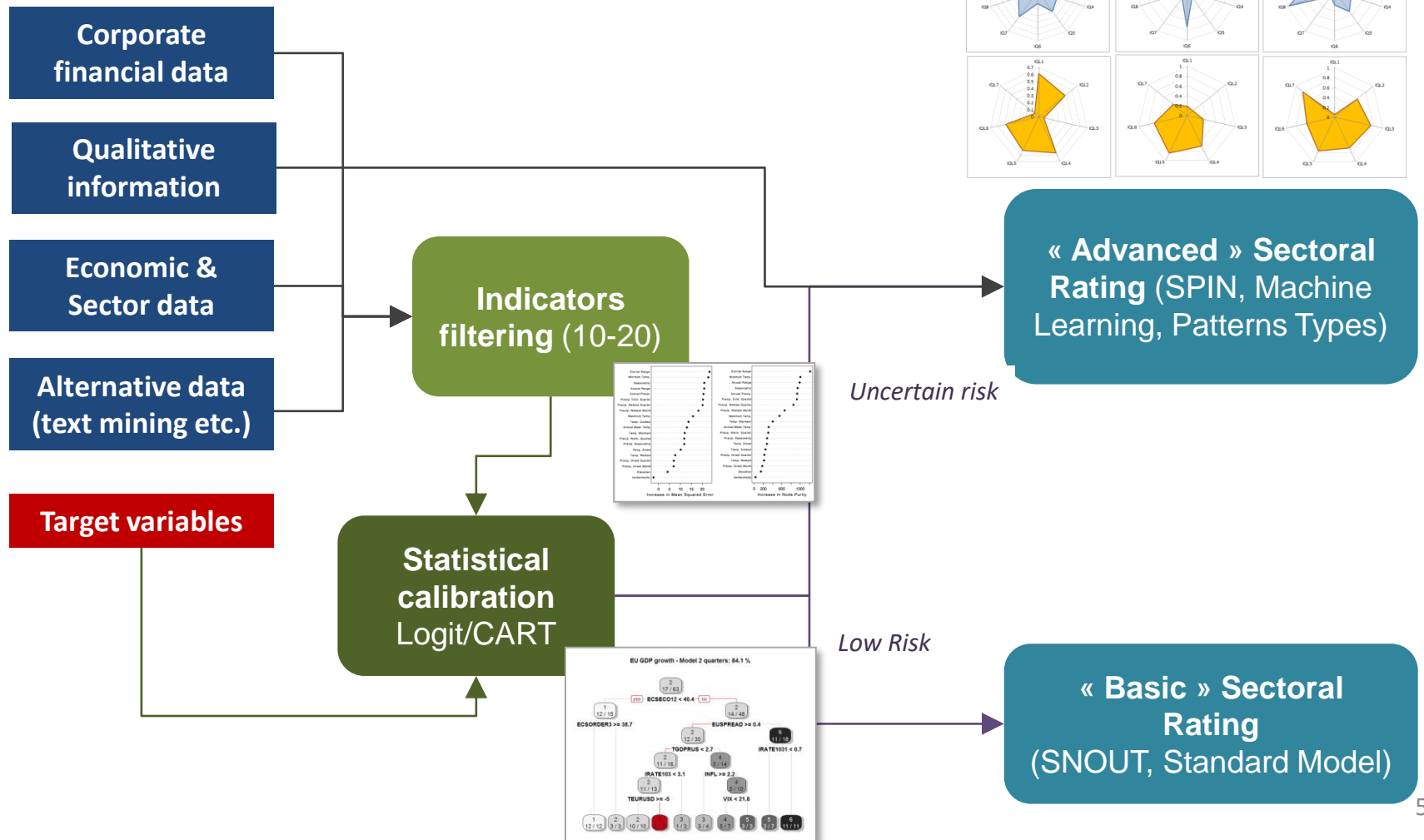
S4 - Output

- Creation of a Web interface to visualize input data and ratings
- Dashboards development with reliable indicators for each sector
- Deliver of modelling tools and the platform
- Workshops



Corporate & Sector Risk Modeling

Quantitative Methodology



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Optional Text Mining module

- Use of alternative information to be incorporated in the database, such as press articles (using TAC base or external information, such as DJ DNA)
- Construction of economic sentiment indicators on each sector/country and extraction of “hot topics”
- Automatic news alert by email (with possible “threshold”, i.e. very negative/positive news) on each sector/country
- Real-time integration and visualization of economic sentiment indicators and topics
- Use of sentiment indicators in quantitative models to calculate corporate/sector ratings.



Contact

Request for proposal for services

How can we help your business?

Please contact Sandrine Lunven, Senior Economist & Project Manager

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