



Empirica

Minimise your credit risk. Increase your profitability. To reduce your exposure to risk you need a predictive scoring system.

Maximise your predictive abilities with Empirica, a scoring solution developed exclusively for TransUnion in partnership with FICO. It balances both negative and positive information from your debtors' credit reports to give you an objective risk assessment based on all data available. Empirica can be accessed online or in batch and can easily be integrated into your decision-making processes.

TransUnion helps businesses worldwide

- Optimise your risk assessment throughout all phases of your customer lifecycle
- Get a more accurate view of your debtors

- Reduce bad debt and increase your profitability
- Identify opportunities for growth in your customer base

MANAGE RISK EFFECTIVELY THROUGH YOUR CUSTOMER LIFECYCLE

Increase your decisioning accuracy

The accuracy of your credit risk decisions directly impacts your bottom line. By utilising a tool that enhances your predictive accuracy, you can lower the risk of granting credit and increase your profitability.

Empirica helps you:

- Assess risk during the account origination process

- Evaluate your debtors' risk in conjunction with expected performance
- Assess debtors with no previous measurable credit experience
- Manage your existing debtors' credit limits and collection obligations
- Rank your debtors by their relative credit risk
- Identify cross-sell opportunities
- Grow your customer base and target new markets

By calculating the probability of a debtor defaulting, you can move to the Advanced IRB approach to meeting Basel II requirements, giving you significant business benefits.

Generating an Empirica Score for Version4

Empirica helps you predict the likelihood of a debtor going three or more months into arrears during the next 12 months. An enquiry triggers the matching program. Once a match is found, all the information on that specific debtor is collated to form the input for the Empirica score generation. The score is directly dependant on the information contained in the debtor's profile.

Additional information

- Empirica V4 uses CPA and NLR payment profile
- Debtors with disputed information will have a score, but disputed information won't form part of the input
- Debtors under debt review or counselling will get a zero score with an L exclusion

INPUT

There are five categories of consumer information

- **Demographic/header**
- **Judgment**
- **Default**
- **Payment profile (CPA and NLR)**
- **Enquiries**



EMPIRICA SCORE GENERATION



EMPIRICA OUTPUT



Score	Score Output	Information on Report
Ranging from 300 ↓ 850	Core Score Ranks consumers according to risk The higher the score, the lower the risk Up to four reason codes are displayed, indicating in order of severity where points were lost	Demographic / Header and either payment profile or judgment or default
1,2 (Bottom 25%) 3,4 (Middle 50%) 5,6 (Top 25%)	Expansion Risk Indicator This group is referred to as the Enquiry-only population where 1 & 2 are the bottom 25%, 3 & 4 are the middle 50% and 5 & 6 are the top 25%	Demographic / Header and enquiries
0 (With exclusion code)	Exclusion Codes A zero score will always be returned with one of the following codes: D Deceased L Administration Order or Debt Counselling N Demographic / header only Z Error - software not available	If N, only Demographic / Header If L, Admin Order or Debt Counselling If D, Deceased indicator

Empirica reason codes

To help you understand why Empirica generates certain scores, up to four reason codes are displayed, showing in order of severity where points were lost. This means the first reason code contributed the most to a debtor not attaining the maximum number of points possible, the second reason code the second most, etc.

The different reason codes are described below

Category	Reason Code	Description
Enquiry Only	01	Demographic information
	02	Missing demographic information
Account Data	03	Lack of usable account information
	04	Lack of recent account information
Amount Owed	05	Amount owed on accounts
	06	Amount owed on revolving accounts
	07	Amount owed on instalment accounts
	08	Amount owed on delinquent accounts
	09	Amount owed on derogatory public records
Account Delinquency	10	Time since delinquency
	11	Level of delinquency on accounts
	12	Number of accounts with delinquency
Public Record	13	Frequency of delinquency
	14	Time since derogatory public record
Serious Delinquency or Public Record	15	Number of derogatory public records
	16	Serious delinquency or derogatory public record
Enquiry	17	Number of recent enquiries
	18	Time between enquiries
	19	Time since enquiry
	20	Number of enquiries
	21	Frequency of enquiries
	22	Amount of recent enquiries
Account Type	23	Number of accounts currently paid as agreed
	24	Number of established accounts
	25	Number of revolving accounts
	26	Number of open instalment accounts
	27	Number of open-ended accounts
	28	Number of recently established accounts
Account Age	29	Number of recently established revolving accounts
	30	Number of recently established instalment accounts
	31	Length of time accounts have been established
	32	Length of time revolving accounts have been established
	33	Length of time instalment accounts have been established
	34	Number of accounts with balance

Category	Reason Code	Description
New Balance	35	Number of revolving accounts with balance
	36	Number of instalment accounts with balance
Account Utilisation	37	Proportion of balance to limit on accounts
	38	Proportion of balance to limit on revolving accounts
	39	Proportion of balance to limit on instalment accounts
	40	Proportion of revolving balance to total balance
Account Balance	41	No recent revolving balances
Account Data	42	Lack of usable revolving account information
Account Age	43	Time since most recently opened revolving account established
Account Type	44	Too few revolving accounts
Account Age and Balance	45	Number of recently established revolving accounts with balances
Account Utilisation	46	History of utilisation on revolving accounts
Account Balance	47	History of balances on revolving accounts
Amount Owed	48	Amount owed on retail accounts
Account Type	49	Number of retail accounts
Account Age	50	Length of time retail accounts have been established
Account Balance	51	Number of retail accounts with balance
Account Utilisation	52	Proportion of balance to limit on retail accounts
Amount Owed	53	No recent retail balances
Account Type	54	Lack of usable retail account information
Account Age	55	Time since most recently opened retail account established
Account Balance	56	Number of recently established retail accounts with balances
Account Utilisation	57	History of utilisation on retail accounts
	58	History of balances on retail accounts
Account Balance	59	Proportion of retail balance to total balance
Account Type	60	Number of instalment accounts
Account Data	61	Lack of usable instalment account information
Account Age	62	Time since most recently opened instalment account established
Account Utilisation	63	History of utilisation on instalment accounts
Account Payment	64	Insufficient instalment payment history
Account Data	65	Lack of usable balance information
Account Delinquency	66	Delinquency on recently opened accounts
Account Age	67	Lack of recently established credit accounts
Account Type	68	Type of newest account
Account Activity	69	Too few accounts with recent payment information
Account Age and Balance	70	Number of recently established accounts with balances
Enquiry Only	71	Geo-demographic information
Account Activity	72	Too many accounts with recent activity

Access advanced scoring technology

Utilising multiple scorecard technology, Empirica applies highly tailored scoring algorithms to your debtors' data. This boosts the predictive power of the entire scoring system.

Empirica features separate scorecard suites for account opening and account management decisions, ensuring ultimate flexibility while maximising your predictive accuracy.

The Expansion Risk Indicator enables you to assess the risk of debtors with no previous measurable credit risk experience. Debtors are grouped into homogeneous categories with clearly distinguishable levels of risk. This powerful indicator gives you greater confidence when granting credit to first-time credit customers.

Manage risk effectively throughout your customer lifecycle

- **Account Acquisition:** Assess risk and segment your debtors, allowing you to grow your existing customers and target new markets
- **Account Origination:** Balance risk and revenue when deciding to grant credit, select profitable applicants and assign appropriate credit limits
- **Account Management:** Manage credit limit authorisations and collection obligations, and identify cross-sell and reissue opportunities

FOR MORE INFORMATION ON EMPIRICA PLEASE CONTACT YOUR SALES REPRESENTATIVE:

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