

Empirica 5

Driving even greater predictive power



WITH EMPIRICA 5 LENDERS CAN:



Be Current

Grow your portfolio with more accurate scores based on today's consumer credit behaviour



Be Compliant

Confidently and cost-effectively meet regulatory requirements and mitigate risk



Be Adaptive

React quickly to market changes and allow for agile decisioning with this ready-made and preconfigured broad-based score

In a major redevelopment of the Empirica Score using sophisticated modelling techniques to mine trends in recent consumer data, Empirica 5 gives lenders the most predictive Empirica Score to date, and minimises operational hurdles associated with

adoption and regulatory compliance. Among many modifications to its predictive characteristics, Empirica 5 features improved assessment of short-term loan information, as well as enhanced prediction on consumers with limited credit histories.

The Release of a Milestone Empirica Score

Building upon a successful 20 year partnership, TransUnion and FICO continue to provide a safe and sound measure of credit risk with their introduction of Empirica 5, the most predictive Empirica Score to date. Empirica 5, like prior versions of Empirica, is composed of two distinct, dedicated sets of scorecards – one system focused on Account Originations risk prediction, and a second system concentrated on Account Management prediction. Empirica 5 will serve as the basis for the TransUnion Score Suite, the family of scores built on broad-based consumer reporting agency data, which includes the Expansion Risk Indicator.

Applying a sophisticated modelling approach, our scientists' latest research on more recent consumer behaviour, and critical market feedback, Empirica 5 was created with a focus on addressing lenders' diverse and demanding scoring needs today. Empirica 5 is more predictive of a consumer's likelihood to repay a debt than previous Empirica Scores. It gives lenders the strongest possible risk assessment for today's consumer credit behaviour, improved operational efficiencies, and support for meeting regulatory compliance.



Be Current

In the development of Empirica 5, our data scientists discovered, explored, and applied several ways to refine the scoring model. The result is a much more powerful Empirica Score for better risk assessments across all credit products and across the credit lifecycle from origination to customer management to capital allocations. It starts with the data. The timing of the Empirica 5 development was aligned to keep pace with major, post-great recession changes in the financial services industry and marketplace – changes in lender reporting, financial products, consumer behaviour, credit information amnesty and economic conditions.

Empirica 5 was developed with an innovative modelling approach from FICO® – one supported by strong model risk management, combining sophisticated proprietary analytic technology with insights gained over FICO's 25+ years of building these broad-based credit risk models. The result is a score that is even more effective across a wide variety of credit industries.



Be Compliant

As with every Empirica Score development, TransUnion stands behind Empirica 5 as a score that can help lenders ensure optimum lift and segmentation in compliance with today's regulatory requirements. Lenders can more confidently and cost-effectively meet regulatory requirements and mitigate risk with access to the relevant Empirica documentation on model development, validation and implementation, which can help guide you in the use and limitations of the model.



Be Adaptive

Backward compatibility is provided with Empirica 5 to simplify the process of adopting the new score and taking advantage of its added power. It's aligned to the same odds-to-score relationship as Empirica 4, with the same minimum score criteria and score ranges as well as additional reason codes tailored to new industries.

Lenders can assess and accurately estimate the value of the new score to the business with the guidance of TransUnion. TransUnion can provide the expert analytics resources and proven methodology to overcome barriers to adoption and tune existing strategies to maximise the benefit of the new Empirica 5 Score.

There are two options available to the lender – conduct the validation and evaluation yourself or partner with TransUnion to:

- More quickly assess the predictive gains of the new score;
- Be confident in the financial lift the scores will bring to the business;
- Derive immediate value without burdening internal resources.

Reason Codes

The reason codes utilised in Empirica 5 are provided below:

REASON CODE	NARRATIVE	REASON CODE	NARRATIVE
1	Reserved for future use	43	Time since most recently opened revolving account established
2	Reserved for future use	44	Too few revolving accounts
3	Lack of usable account information	45	Number of recently established revolving accounts with balances
4	Lack of recent account information	46	History of utilisation on revolving accounts
5	Amount owed on accounts	47	History of balances on revolving accounts
6	Amount owed on revolving accounts	48	Amount owed on retail accounts
7	Amount owed on instalment accounts	49	Number of retail accounts
8	Amount owed on delinquent accounts	50	Length of time retail accounts have been established
9	Amount owed on derogatory public records	51	Number of retail accounts with balance
10	Time since delinquency	52	Proportion of balance to limit on retail accounts
11	Level of delinquency on accounts	53	No recent retail balances
12	Number of accounts with delinquency	54	Lack of usable retail account information
13	Frequency of delinquency	55	Time since most recently opened retail account established
14	Time since derogatory public record	56	Number of recently established retail accounts with balances
15	Number of derogatory public records	57	History of utilisation on retail accounts
16	Serious delinquency or derogatory public record	58	History of balances on retail accounts
17	Number of recent hard enquiries	59	Proportion of retail balance to total balance
18	Time between hard enquiries	60	Number of instalment accounts
19	Time since hard enquiry	61	Lack of usable instalment account information
20	Number of hard enquiries	62	Time since most recently opened instalment account established
21	Frequency of hard enquiries	63	History of utilisation on instalment accounts
22	Amount of recent hard enquiries	64	Insufficient instalment payment history
23	Number of accounts currently paid as agreed	65	Lack of usable balance information
24	Number of established accounts	66	Delinquency on recently opened accounts
25	Number of revolving accounts	67	Lack of recently established credit accounts
26	Number of open instalment accounts	68	Reserved for future use
27	Number of open-ended accounts	69	Too few accounts with recent payment information
28	Number of recently established accounts	70	Number of recently established accounts with balances
29	Number of recently established revolving accounts	71	Reserved for future use
30	Number of recently established instalment accounts	72	Too many accounts with recent activity
31	Length of time accounts have been established	73	Reserved for future use
32	Length of time revolving accounts have been established	74	Reserved for future use
33	Length of time instalment accounts have been established	75	History of balances on accounts
34	Number of accounts with balance	76	Lack of usable cellular account information
35	Number of revolving accounts with balance	77	Reserved for future use
36	Number of instalment accounts with balance	78	Length of time cellular accounts have been established
37	Proportion of balance to limit on accounts	79	Lack of usable auto loan information
38	Proportion of balance to limit on revolving accounts	80	Number of active auto loans currently paid as agreed
39	Proportion of balance to limit on instalment accounts	81	Number of short-term loan accounts
40	Proportion of revolving balance to total balance	82	Insufficient length of credit eligibility
41	No recent revolving balances	83	Missing eligibility information
42	Lack of usable revolving account information		

A Novel Empirica Score

Data scientists at FICO look for new ways to drive improvements in every Empirica Score redevelopment. Look how much is new in Empirica 5:

- A more exhaustive characteristic selection process to build a score that is even more predictive across a wide variety of situations and product lines.
- A more sophisticated way to assess consumers with short-term loans and cellular account experience to better match the true credit risk.
- Specific assessment of consumers who have experience with short-term loans. These consumers are generally low-income persons, poor and vulnerable non-poor. Empirica 5 can do an even better job in predicting risk for this segment.
- Further refined young and thin file treatments. Empirica 5 addresses lenders' desire for more effective risk assessment for consumers with limited credit history, or so-called young and thin files. Validation results demonstrate improved risk prediction for these segments of the population.
- Adjustments to non-traditional trade line evaluations. Previous Empirica Scores have included items such as utilities. Now, Empirica 5 factors in cellular lines, when reported, in order to leverage a more comprehensive view of a consumer's credit history.

LEARN MORE

To find out more about Empirica 5, contact your TU representative or visit us at www.transunioninsights.co.za/empirica/

SOUTH AFRICA

Johannesburg

+27 11 214 6000

Durban

+27 31 573 8899

Cape Town

+27 21 401 4200

BOTSWANA

+267 390 3535

NAMIBIA

+264 61 227 142

SWAZILAND

+268 2505 7844