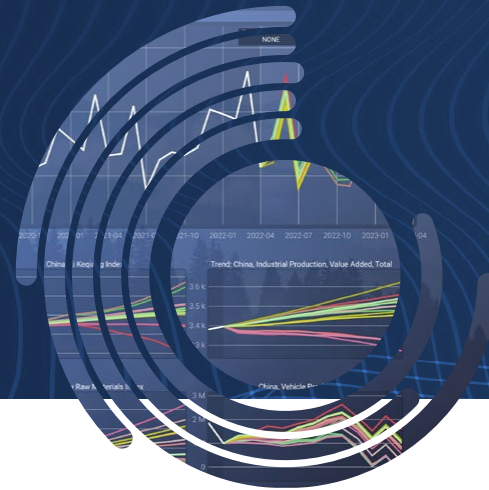


# Macrobond x Indicio

Intelligent forecasting with the highest accuracy



Identify and plan for market trend shifts earlier. Macrobond and Indicio have teamed up to deliver a complete forecasting solution that combines our comprehensive database with Indicio's world-class data science technology.

## What is Indicio?

Indicio is a multi-model solution that enables users to quickly build a wide range of sophisticated and statistically robust forecasts. Developed from the best practices of academia, the platform combines the latest statistical, AI and machine-learning models with a simple interface to increase accuracy, transparency, and speed. Users can expect to detect trend shifts at least 1-2 months earlier, with a 40-60% improvement in overall accuracy.

Indicio can be accessed via any web browser so you can build, check and update forecasts from any location with an internet connection

## About Macrobond

**FOUNDED**  
January 2008

**NUMBER OF CUSTOMERS**  
800+ global financial and governmental organisations

**KEY LOCATIONS**  
Malmö, Stockholm, London, New York, Hong Kong



Indicio allows you to check all the boxes in a responsible way. Where before you were relying on either history or instinct or some sort of pre-conceived notion of what has worked for you, with Indicio, you're creating an algorithm to sort through these things. It's like having a team of quants to make sure you're on the right path."

**Donald Rissmiller**  
Economic Research,  
Strategas Research Partners

# Building forecasts with Macrobond data

Subscribers with a [Macrobond Data+](#) license can access any or all of the almost 300 million time series from our [core database](#) directly from Indicio via our [API](#).

Using Indicio's simple and intuitive point-and-click interface, we now show how you can quickly generate a wide range of highly accurate forecasts in just **five steps** – with no coding required.

## STEP 1

**MACROBOND DATA STRUCTURE**  
Integrated within Indicio platform

## Import and clean your data

Using Macrobond's data tree, which has been replicated in Indicio's web platform, find and import your data via the same three entry points: country and region, source and release, and concept and category. You can also search by keywords or series identifiers.

Indicio automatically processes your imported data, testing for seasonality, missing values, and outliers. If any of these are detected, you can choose to adjust the data as appropriate.

## STEP 2

**INDICATOR VARIABLES**  
Ranked by explanatory power and relevance

## Identify optimal indicators

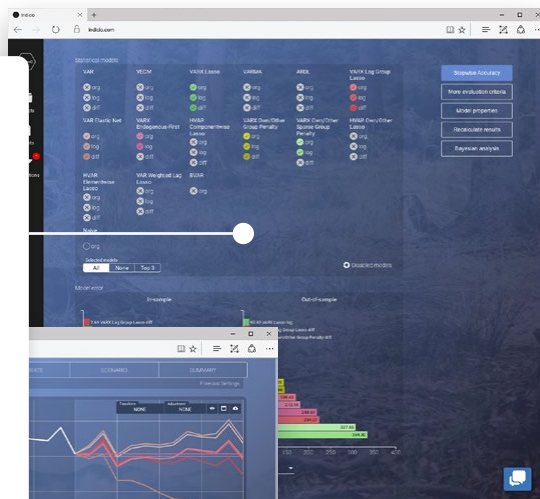
Choose the variables you think will be most relevant for forecasting the primary data point you have selected. Indicio then calculates and ranks each explanatory variable according to its causality to your main variable of interest, using partial correlation and LASSO regularisation to reduce noise and remove irrelevant coefficients.



## STEP 3

### MULTIVARIATE MODELS

VAR  
VECM  
VARMA  
VARX  
Elastic Models  
Penalised models  
Bayesian VAR  
Hierarchical VAR  
GRU  
ANN  
LSTM



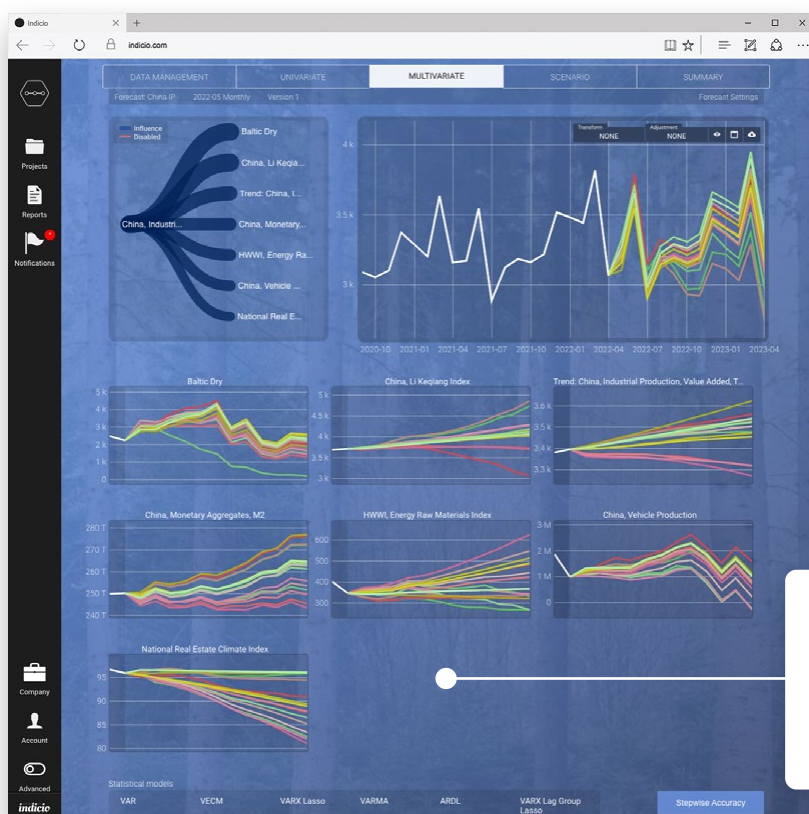
## Build the most effective model

Indicio has a rich library of cutting-edge time series models that can be applied to your forecast data. After you import your dependent variable, the platform automatically creates several univariate models to serve as a benchmark.

Indicio can also perform multivariate analyses. With just one click, it automatically tests the following advanced models, including penalised models, so you can determine the best ones to use on your data.

### UNIVARIATE MODELS

ARIMA  
ETS  
Theta  
STL  
TBATS  
Univariate Neural Networks  
Prophet  
Naïve

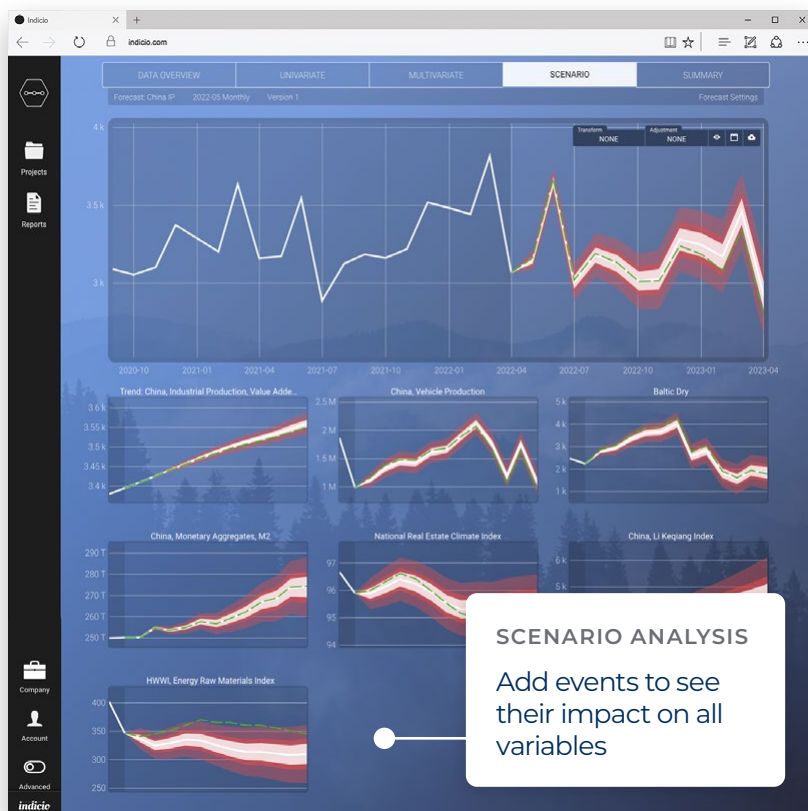


Finally, Indicio displays forecasts for each explanatory variable, with each coloured line referencing the result from a specific multivariate model.

### VISUALISE THE OUTPUT

Compare forecasts from all available models

## STEP 4



## Add events and test scenarios

You can also control your model for specific events and shocks to see how these scenarios would affect your outlook. Simply create event groups to add spikes, level shifts and exponential decay effects to certain time periods – e.g., adding a Covid-19 shock to control for the outliers of 2020. You can also use these exogenous variables to perform a conditional forecast and compare it with your baseline model.

## STEP 5



## Select your model

Indicio takes the results of all your models and provides each with a performance weighting that is automatically adjusted over time. This helps you determine the best model to use at any given moment, resulting in higher accuracy. In addition, Macrobond technology enables you to update your forecasts with a single click as new data emerges, further improving accuracy.

Indicio is available to all Macrobond subscribers with a Data+ licence.

For more information please contact your **account manager** or email **marketing@macrobond.com**

**macrobond.com**