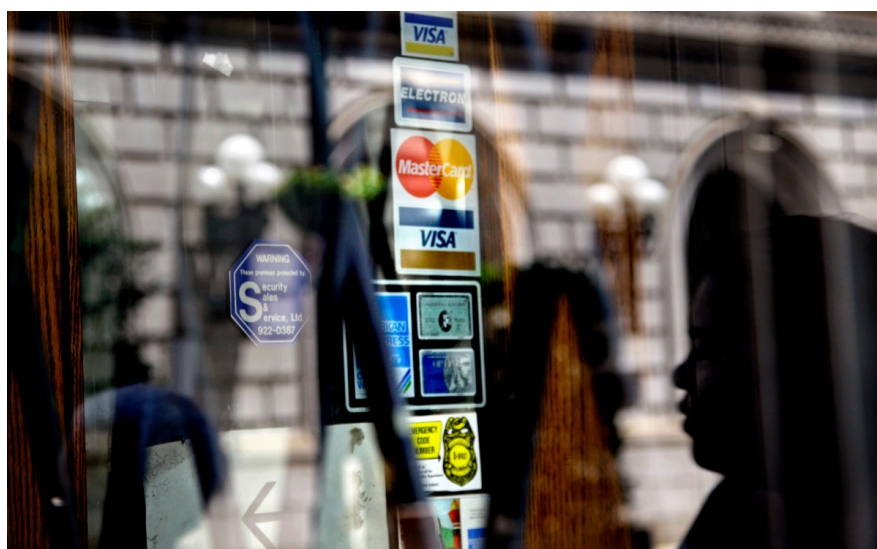


## Fairness in consumer credit markets

Making sure you are treated fairly when applying for credit is becoming much more reliant on data that shows what you do, rather than who you are, **writes Amanda Cooper**



As a borrower, you are only as good as your credit score. But what makes up a credit score and what can influence it is often an opaque matter. With the proliferation of machine learning and big data, algorithms are playing a larger role in decisions by financial institutions to grant a mortgage or loan. In theory, this should increase transparency and remove biases associated with things such as gender, race, or even postal code. But does it?

This was the subject of a discussion among experts at a Think Forward Initiative event in Sweden on Thursday. Stefania Albanesi, Professor of Economics at the University of Pittsburgh, opened the discussion by noting that, on the surface, certain characteristics such as gender and religion shouldn't affect access to credit. However, simply excluding these factors is no guarantee that they won't ultimately affect access to credit because the data behind the models may implicitly include these. Indeed models need to be tested to ensure this is not happening.

This is especially important as evidence suggests several groups face difficulty accessing credit. The young, those on low incomes and minority groups seem particularly disadvantaged. The panel generally agreed that a more data-intensive approach to credit scoring can play a role in reducing the disadvantage that these groups face.

But Chuck Robida from consumer credit reporting company Experian said consumers won't be protected fully from a biased system, as there can be an inherent bias in the data and models used in those algorithms. His organisation looks at what he terms "credit behaviour" to determine credit performance, which brings in the need for data beyond merely a name, which in itself could reveal a borrower's likely ethnicity or location, for example.

## How you spend and save

Jan Dodion, head of risk at ING, agrees. In any traditional credit report, it will be a consumer's socio-demographic information that will be the most relevant, followed usually by information from a credit bureau, which more often than not, typically only reflects negative events, such as a default, rather than positive ones, such as regularity and reliability in paying household bills. "The moment we start incorporating 'transactional data ... the way in which you use your daily banking products, not credit, but your saving account, your current account and sometimes your credit cards, it starts ruling out the social demographic drivers," he told the audience. A financial institution's models can contribute to making decisions based on what you do with your money, rather than who you are.

## But is it fair?

Brian Bucks, from the Consumer Financial Protection Bureau in the United States, says deciding what criteria to use when establishing fairness in lending is an important choice. One of the challenges that a regulator faces is that of availability of data, even so-called alternative, behavioural data. If a particular type of data is not universally available, but rather, available only to a certain sector of the population, then fairness becomes even harder to ensure. In lending terms, many consumers are "invisible", meaning that they either have no credit record, which in turn makes them more likely to be turned down for a loan and excluded altogether. Bucks said some of the bureau's research has shown that access to high-speed internet has a far tighter link to a borrower's "credit visibility" than their physical proximity to a bank. So if a lender's algorithm were incorporating digital, or behavioural, data into its traditional scoring models to determine a borrower's creditworthiness, anyone without a mobile phone could potentially find themselves rejected.

## Digital footprints

Bucks sees cases of lenders that are using data such as education or employment history as part of their models. By looking at an organisation's credit applications and associated outcomes, Bucks can see how alternative data is working "in the real world". Tarun Ramadorai, from Imperial College Business School and the Centre for Economic Policy Research, a think tank, has similar concerns with regards to how inclusive this newer data is. A consumer is more likely to want to hand over their "digital footprint" to their lender if that footprint is good, which in turn creates what Ramadorai calls a "massive censoring issue".

## No surprises

ING's Dodion says application of new data sources, modelling methods and technologies are crucial to developing better risk models, which holds clear potential advantages for consumers. He explained that more focus on transactions-based models can result in less bias and broader access to credit. The greater the amount of automation, the more efficient a bank becomes, which then allows it to offer more affordable terms to a wider range of customers. The more you automate,

the more you can ensure you have priced your products correctly and remove the scope for any nasty surprises, such as a default. “Surprises are never good,” he says, “not for a bank, not for a consumer and not for society.”

The discussion was part of the Think Forward Initiative event “Fairness In Consumer Credit Markets” [held on 9 May in Lund, Sweden](#). This was organised by Stefania Albanesi from the University of Pittsburgh and Tarun Ramadorai from Imperial College Business School.

The Think Forward Initiative seeks to bring together global experts to find out how and why people make financial decisions. Stefan van Woelderen, research lead of TFI, gave the audience an update on its latest achievements and expectations for the next few months. The Think Forward Initiative's goal is to find out how people make certain choices as individuals in their social and macro context, and help them make better ones. Its main partners are ING, the Centre for Economic Policy Research (CEPR), Deloitte, Dell EMC, Dimension Data and Amazon Web Services. The wider TFI network consists of more than 200 different organisations (including universities, NGOs, companies, etc.) and more than 1,500 individuals, of which almost half are researchers.

## Author

### **Alissa Lefebvre**

Economist

[alissa.lefebvre@ing.com](mailto:alissa.lefebvre@ing.com)

### **Deepali Bhargava**

Regional Head of Research, Asia-Pacific

[Deepali.Bhargava@ing.com](mailto:Deepali.Bhargava@ing.com)

### **Ruben Dewitte**

Economist

+32495364780

[ruben.dewitte@ing.com](mailto:ruben.dewitte@ing.com)

### **Kinga Havasi**

Economic research trainee

[kinga.havasi@ing.com](mailto:kinga.havasi@ing.com)

### **Marten van Garderen**

Consumer Economist, Netherlands

[marten.van.garderen@ing.com](mailto:marten.van.garderen@ing.com)

### **David Havrlant**

Chief Economist, Czech Republic

420 770 321 486

[david.havrlant@ing.com](mailto:david.havrlant@ing.com)

**Sander Burgers**

Senior Economist, Dutch Housing

[sander.burgers@ing.com](mailto:sander.burgers@ing.com)

**Lynn Song**

Chief Economist, Greater China

[lynn.song@asia.ing.com](mailto:lynn.song@asia.ing.com)

**Michiel Tukker**

Senior European Rates Strategist

[michiel.tukker@ing.com](mailto:michiel.tukker@ing.com)

**Michal Rubaszek**

Senior Economist, Poland

[michal.rubaszek@ing.pl](mailto:michal.rubaszek@ing.pl)

**This is a test author**

**Stefan Posea**

Economist, Romania

[tiberiu-stefan.posea@ing.com](mailto:tiberiu-stefan.posea@ing.com)

**Marine Leleux**

Sector Strategist, Financials

[marine.leleux2@ing.com](mailto:marine.leleux2@ing.com)

**Jesse Norcross**

Senior Sector Strategist, Real Estate

[jesse.norcross@ing.com](mailto:jesse.norcross@ing.com)

**Teise Stellema**

Research Assistant, Energy Transition

[teise.stellema@ing.com](mailto:teise.stellema@ing.com)

**Diederik Stadig**

Sector Economist, TMT & Healthcare

[diederik.stadig@ing.com](mailto:diederik.stadig@ing.com)

**Diogo Gouveia**

Sector Economist

[diogo.duarte.vieira.de.gouveia@ing.com](mailto:diogo.duarte.vieira.de.gouveia@ing.com)

**Marine Leleux**

Sector Strategist, Financials

[marine.leleux2@ing.com](mailto:marine.leleux2@ing.com)

**Ewa Manthey**

Commodities Strategist  
[ewa.manthey@ing.com](mailto:ewa.manthey@ing.com)

## ING Analysts

**James Wilson**  
EM Sovereign Strategist  
[James.wilson@ing.com](mailto:James.wilson@ing.com)

**Sophie Smith**  
Digital Editor  
[sophie.smith@ing.com](mailto:sophie.smith@ing.com)

**Frantisek Taborsky**  
EMEA FX & FI Strategist  
[frantisek.taborsky@ing.com](mailto:frantisek.taborsky@ing.com)

**Adam Antoniak**  
Senior Economist, Poland  
[adam.antoniak@ing.pl](mailto:adam.antoniak@ing.pl)

**Min Joo Kang**  
Senior Economist, South Korea and Japan  
[min.joo.kang@asia.ing.com](mailto:min.joo.kang@asia.ing.com)

**Coco Zhang**  
ESG Research  
[coco.zhang@ing.com](mailto:coco.zhang@ing.com)

**Jan Frederik Slijkerman**  
Senior Sector Strategist, TMT  
[jan.frederik.slijkerman@ing.com](mailto:jan.frederik.slijkerman@ing.com)

**Katinka Jongkind**  
Senior Economist, Services and Leisure  
[Katinka.Jongkind@ing.com](mailto:Katinka.Jongkind@ing.com)

**Marina Le Blanc**  
Sector Strategist, Financials  
[Marina.Le.Blanc@ing.com](mailto:Marina.Le.Blanc@ing.com)

**Samuel Abettan**  
Junior Economist  
[samuel.abettan@ing.com](mailto:samuel.abettan@ing.com)

**Franziska Biehl**  
Economist, Germany

[Franziska.Marie.Biehl@ing.de](mailto:Franziska.Marie.Biehl@ing.de)

**Rebecca Byrne**

Senior Editor and Supervisory Analyst

[rebecca.byrne@ing.com](mailto:rebecca.byrne@ing.com)

**Mirjam Bani**

Sector Economist, Commercial Real Estate & Public Sector (Netherlands)

[mirjam.bani@ing.com](mailto:mirjam.bani@ing.com)

**Timothy Rahill**

Credit Strategist

[timothy.rahill@ing.com](mailto:timothy.rahill@ing.com)

**Leszek Kasek**

Senior Economist, Poland

[leszek.kasek@ing.pl](mailto:leszek.kasek@ing.pl)

**Oleksiy Soroka, CFA**

Senior High Yield Credit Strategist

[oleksiy.soroka@ing.com](mailto:oleksiy.soroka@ing.com)

**Antoine Bouvet**

Head of European Rates Strategy

[antoine.bouvet@ing.com](mailto:antoine.bouvet@ing.com)

**Jeroen van den Broek**

Global Head of Sector Research

[jeroen.van.den.broek@ing.com](mailto:jeroen.van.den.broek@ing.com)

**Edse Dantuma**

Senior Sector Economist, Industry and Healthcare

[edse.dantuma@ing.com](mailto:edse.dantuma@ing.com)

**Francesco Pesole**

FX Strategist

[francesco.pesole@ing.com](mailto:francesco.pesole@ing.com)

**Rico Luman**

Senior Sector Economist, Transport and Logistics

[Rico.Luman@ing.com](mailto:Rico.Luman@ing.com)

**Jurjen Witteveen**

Sector Economist

[jurjen.witteveen@ing.com](mailto:jurjen.witteveen@ing.com)

**Dmitry Dolgin**

Chief Economist, CIS

[dmitry.dolgin@ing.de](mailto:dmitry.dolgin@ing.de)

**Nicholas Mapa**

Senior Economist, Philippines

[nicholas.antonio.mapa@asia.ing.com](mailto:nicholas.antonio.mapa@asia.ing.com)

**Egor Fedorov**

Senior Credit Analyst

[egor.fedorov@ing.com](mailto:egor.fedorov@ing.com)

**Sebastian Franke**

Consumer Economist

[sebastian.franke@ing.de](mailto:sebastian.franke@ing.de)

**Gerben Hieminga**

Senior Sector Economist, Energy

[gerben.hieminga@ing.com](mailto:gerben.hieminga@ing.com)

**Nadège Tillier**

Head of Corporates Sector Strategy

[nadege.tillier@ing.com](mailto:nadege.tillier@ing.com)

**Charlotte de Montpellier**

Senior Economist, France and Switzerland

[charlotte.de.montpellier@ing.com](mailto:charlotte.de.montpellier@ing.com)

**Laura Straeter**

Behavioural Scientist

+31(0)611172684

[laura.Straeter@ing.com](mailto:laura.Straeter@ing.com)

**Valentin Tataru**

Chief Economist, Romania

[valentin.tataru@ing.com](mailto:valentin.tataru@ing.com)

**James Smith**

Developed Markets Economist, UK

[james.smith@ing.com](mailto:james.smith@ing.com)

**Suvi Platerink Kosonen**

Senior Sector Strategist, Financials

[suvi.platerink-kosonen@ing.com](mailto:suvi.platerink-kosonen@ing.com)

**Thijs Geijer**

Senior Sector Economist, Food & Agri

[thijs.geijer@ing.com](mailto:thijs.geijer@ing.com)

**Maurice van Sante**

Senior Economist Construction & Team Lead Sectors  
[maurice.van.sante@ing.com](mailto:maurice.van.sante@ing.com)

**Marcel Klok**  
Senior Economist, Netherlands  
[marcel.klok@ing.com](mailto:marcel.klok@ing.com)

**Piotr Poplawski**  
Senior Economist, Poland  
[piotr.poplawski@ing.pl](mailto:piotr.poplawski@ing.pl)

**Paolo Pizzoli**  
Senior Economist, Italy, Greece  
[paolo.pizzoli@ing.com](mailto:paolo.pizzoli@ing.com)

**Marieke Blom**  
Chief Economist and Global Head of Research  
[marieke.blom@ing.com](mailto:marieke.blom@ing.com)

**Raoul Leering**  
Senior Macro Economist  
[raoul.leering@ing.com](mailto:raoul.leering@ing.com)

**Maarten Leen**  
Head of Global IFRS9 ME Scenarios  
[maarten.leen@ing.com](mailto:maarten.leen@ing.com)

**Maureen Schuller**  
Head of Financials Sector Strategy  
[Maureen.Schuller@ing.com](mailto:Maureen.Schuller@ing.com)

**Warren Patterson**  
Head of Commodities Strategy  
[Warren.Patterson@asia.ing.com](mailto:Warren.Patterson@asia.ing.com)

**Rafal Benecki**  
Chief Economist, Poland  
[rafal.benecki@ing.pl](mailto:rafal.benecki@ing.pl)

**Philippe Ledent**  
Senior Economist, Belgium, Luxembourg  
[philippe.ledent@ing.com](mailto:philippe.ledent@ing.com)

**Peter Virovacz**  
Senior Economist, Hungary  
[peter.virovacz@ing.com](mailto:peter.virovacz@ing.com)

**Inga Fechner**



Senior Economist, Germany, Global Trade  
[inga.fechner@ing.de](mailto:inga.fechner@ing.de)

**Dimitry Fleming**

Senior Data Analyst, Netherlands  
[Dimitry.Fleming@ing.com](mailto:Dimitry.Fleming@ing.com)

**Ciprian Dascalu**

Chief Economist, Romania  
+40 31 406 8990  
[ciprian.dascalu@ing.com](mailto:ciprian.dascalu@ing.com)

**Muhammet Mercan**

Chief Economist, Turkey  
[muhammet.mercan@ingbank.com.tr](mailto:muhammet.mercan@ingbank.com.tr)

**Iris Pang**

Chief Economist, Greater China  
[iris.pang@asia.ing.com](mailto:iris.pang@asia.ing.com)

**Sophie Freeman**

Writer, Group Research  
+44 20 7767 6209  
[Sophie.Freeman@uk.ing.com](mailto:Sophie.Freeman@uk.ing.com)

**Padhraic Garvey, CFA**

Regional Head of Research, Americas  
[padhraic.garvey@ing.com](mailto:padhraic.garvey@ing.com)

**James Knightley**

Chief International Economist, US  
[james.knightley@ing.com](mailto:james.knightley@ing.com)

**Tim Condon**

Asia Chief Economist  
+65 6232-6020

**Martin van Vliet**

Senior Interest Rate Strategist  
+31 20 563 8801  
[martin.van.vliet@ing.com](mailto:martin.van.vliet@ing.com)

**Robert Carnell**

Regional Head of Research, Asia-Pacific  
[robert.carnell@asia.ing.com](mailto:robert.carnell@asia.ing.com)

**Karol Pogorzelski**

Senior Economist, Poland

[Karol.Pogorzelski@ing.pl](mailto:Karol.Pogorzelski@ing.pl)

**Carsten Brzeski**

Global Head of Macro

[carsten.brzeski@ing.de](mailto:carsten.brzeski@ing.de)

**Viraj Patel**

Foreign Exchange Strategist

+44 20 7767 6405

[viraj.patel@ing.com](mailto:viraj.patel@ing.com)

**Owen Thomas**

Global Head of Editorial Content

+44 (0) 207 767 5331

[owen.thomas@ing.com](mailto:owen.thomas@ing.com)

**Bert Colijn**

Chief Economist, Netherlands

[bert.colijn@ing.com](mailto:bert.colijn@ing.com)

**Peter Vanden Houte**

Chief Economist, Belgium, Luxembourg, Eurozone

[peter.vandenhoute@ing.com](mailto:peter.vandenhoute@ing.com)

**Benjamin Schroeder**

Senior Rates Strategist

[benjamin.schroeder@ing.com](mailto:benjamin.schroeder@ing.com)

**Chris Turner**

Global Head of Markets and Regional Head of Research for UK & CEE

[chris.turner@ing.com](mailto:chris.turner@ing.com)

**Gustavo Rangel**

Chief Economist, LATAM

+1 646 424 6464

[gustavo.rangel@ing.com](mailto:gustavo.rangel@ing.com)

**Carlo Cocuzzo**

Economist, Digital Finance

+44 20 7767 5306

[carlo.cocuzzo@ing.com](mailto:carlo.cocuzzo@ing.com)