



Invisible Primes: The Use of Alternative Credit Data in Auto Underwriting

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Kenneth Benton
Principal Consumer Regulations Specialist



Overview

Disclaimer: The views expressed today are the presenter's and do not necessarily reflect the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System

“For decades, the arbiters of creditworthiness have been two powerful groups: the Big Three credit bureaus, which keep files on roughly 200 million consumers, and score creators like FICO, which turn that raw data into a three-digit key to credit cards, car loans, mortgages and more.”



The FICO logo is displayed in a bold, blue, sans-serif font.

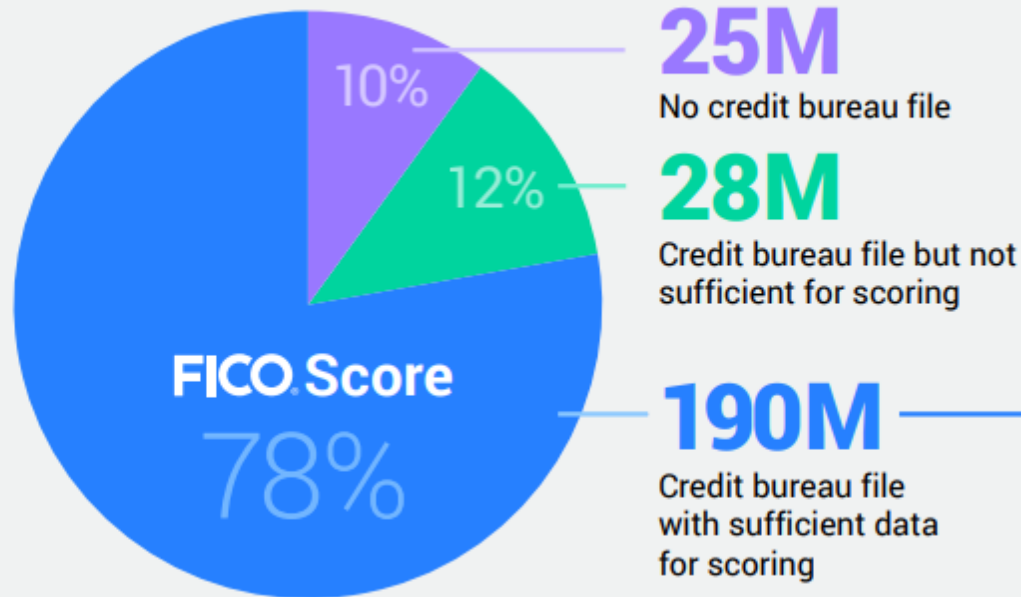


“But with tens of millions of consumers left out of traditional credit scoring... established players and slick start-ups alike are collecting and crunching all manner of other data to determine who ought to get a loan and how much they should pay....Data is really a big equalizer.”

“No Credit Score? No Problem! Just Hand Over More Data”

New York Times 11/29/21

The Credit Invisible



FICO® Score Minimum Scoring Criteria

Cannot be deceased

One trade line reported by creditor within last six months

One trade line at least six months old

- **254 million U.S. adults (2020 census data)**
- **Nearly 21% of U.S. adults (53 million) are credit invisible!**

The Credit Invisible

- **The Credit Invisible refers *thin-file and no file* applicants (TFNF).**
- TFNF consumer population sizes
 - 28 million Americans with **no** credit history
 - 25 million Americans are **unscorable** because of **insufficient or stale data**
- Reasons for the credit invisible include
 - Paying with cash
 - Living in areas without credit opportunities
 - Creditors not reporting to the credit bureaus
 - Family cultures do not believe in borrowing
 - Status as a first-time borrower
 - Immigration status

*[Source](#): National Credit Union Administration

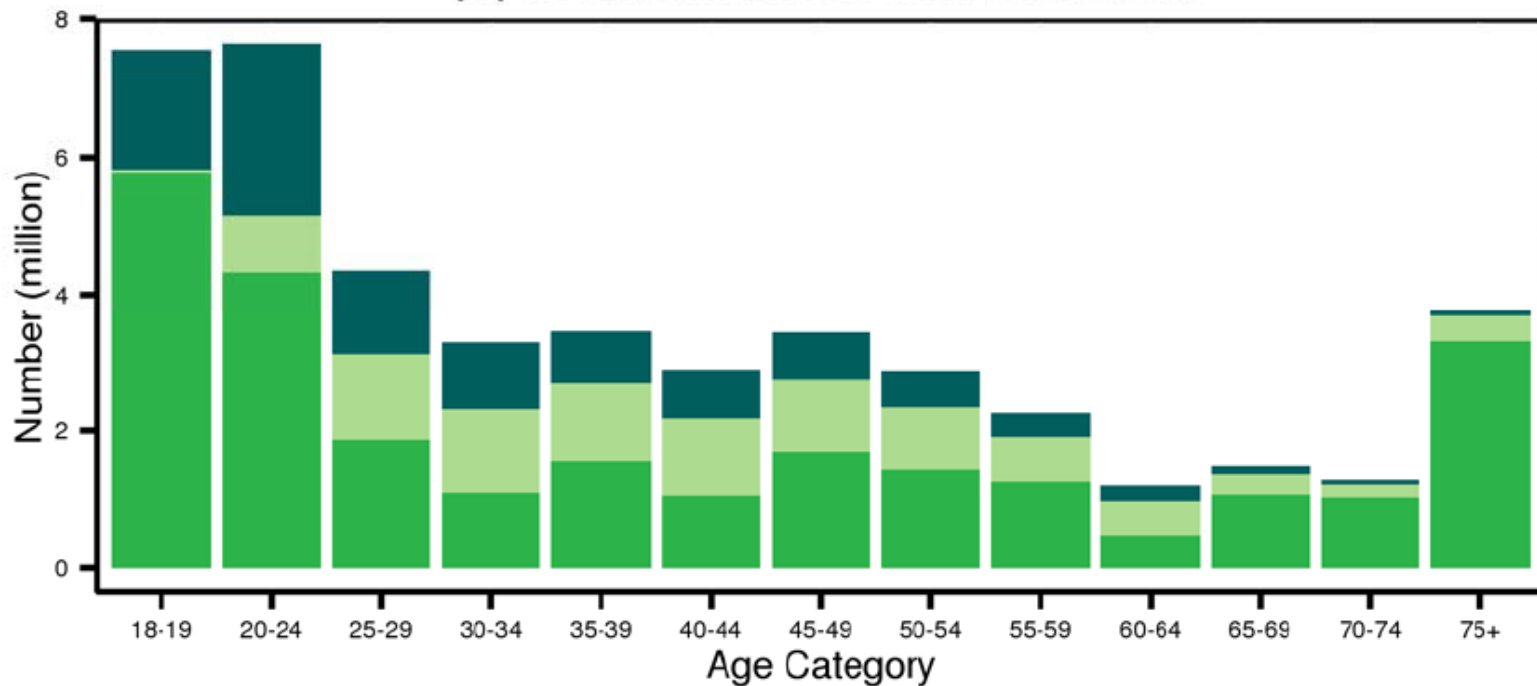
Defining *invisible*

- Most consumers have a mix of **visible** and **invisible** credit activity
 - **Visible** credit activity refers to data reported to the three national credit bureaus (Experian, Equifax, and TransUnion)
 - **Invisible** credit activity refers to data not used in traditional credit scoring. Including **payments for rent, telecommunications, insurance, and utilities**

Credit Invisibles by Age

FIGURE 1: INCIDENCE AND NUMBER OF CONSUMERS THAT ARE CREDIT INVISIBLE OR HAVE RECORDS THAT ARE UNSCORED

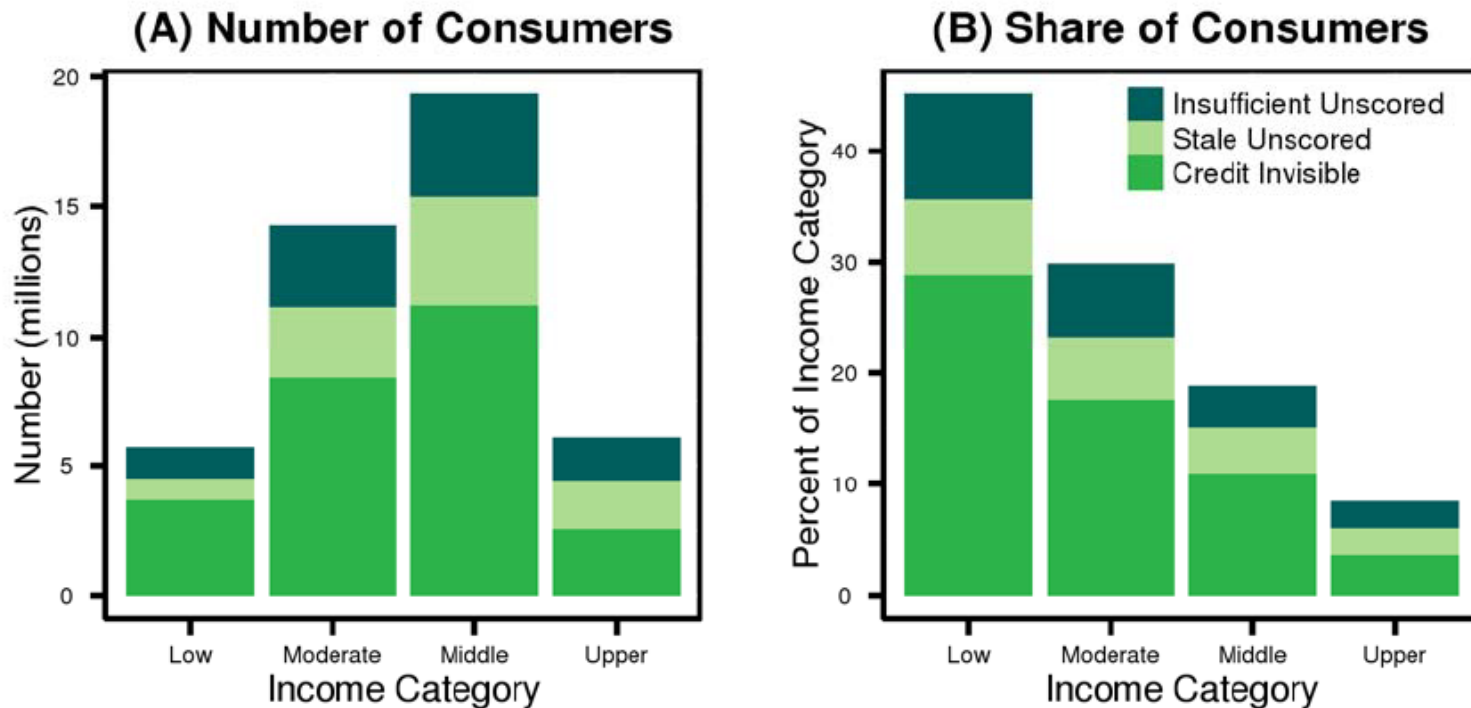
(B) Credit Invisibles and Unscored



[Source: CFPB 2016 report](#)

Credit Invisibles by Income

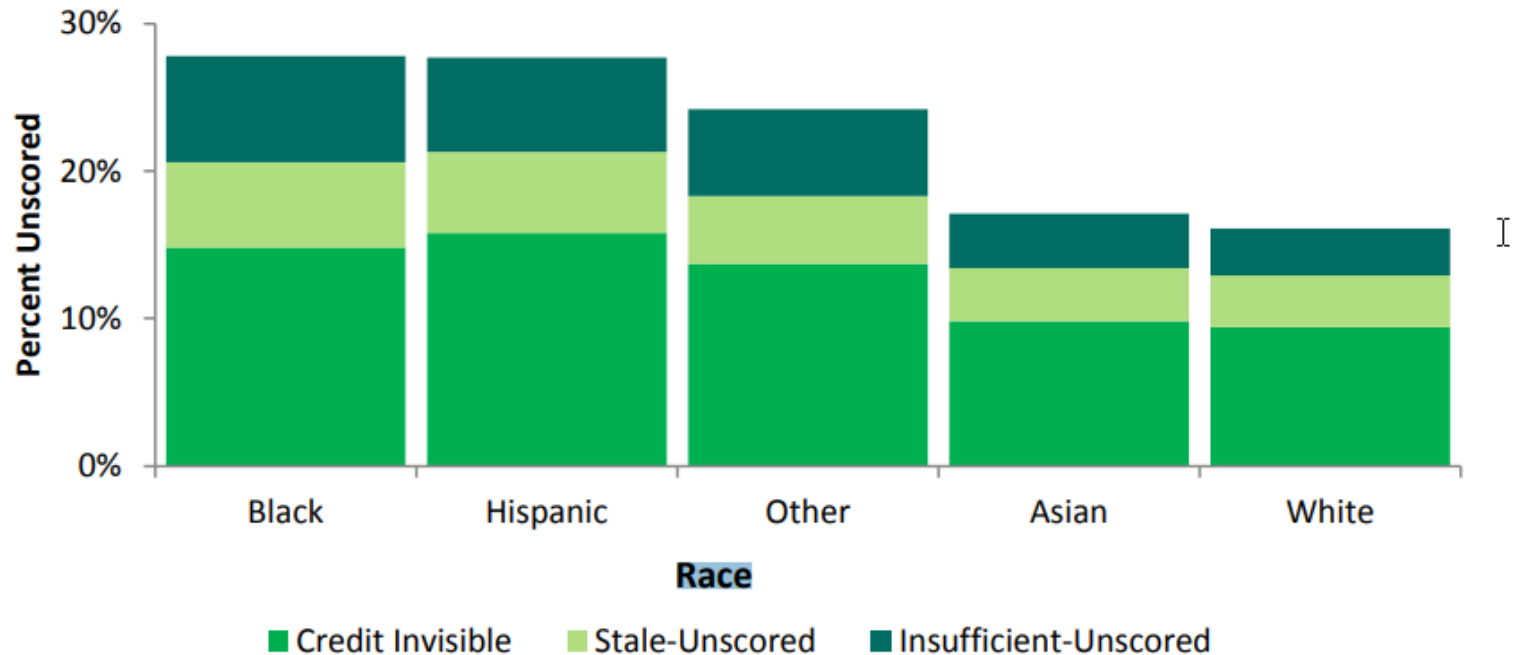
FIGURE 2: NUMBER AND INCIDENCE OF CONSUMERS THAT ARE CREDIT INVISIBLE OR HAVE AN UNSCORED CREDIT RECORD BY CENSUS TRACT INCOME LEVEL



[Source: CFPB 2016 report](#)

Credit Invisible by Race

FIGURE 2: UNSCORED CONSUMERS BY RACE



[Source: CFPB 2016 report](#)

Consequences of Being Credit Invisible

- **Because most lenders rely on credit histories, 53 million Americans face challenges obtaining credit.**
- Access to credit is a critical aspect of financial wellness and wealth building, including financing for a car or home.
- ***Catch-22: You need a credit history to obtain credit, but cannot establish one without first obtaining credit***
- The credit invisible may also experience adverse outcomes in other critical aspects of their personal finances because employers, landlords, and insurers often rely on credit histories to evaluate applicants.

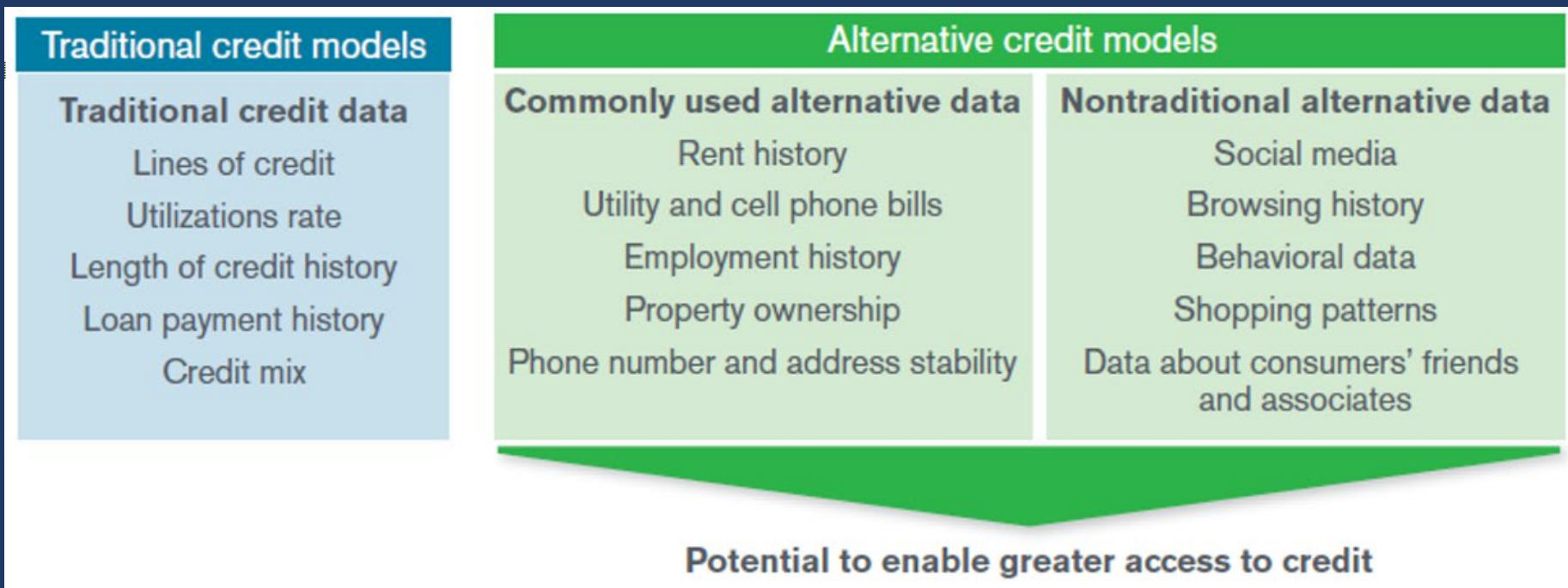
Alternative data

“Even though the vast majority of the U.S. population—80 percent—never defaulted on a loan, less than half have access to prime credit.”

-[Dimuthu Ratnadiwakara](#), assistant professor of finance at LSU and co-author of the NBER working paper, *Invisible Primes: Fintech Lending with Alternative Data*

- While credit history has strong predictive value for credit decisions, alternative data can also reliably inform credit decisions and allow lenders to more accurately price credit risk

Types of Credit Data



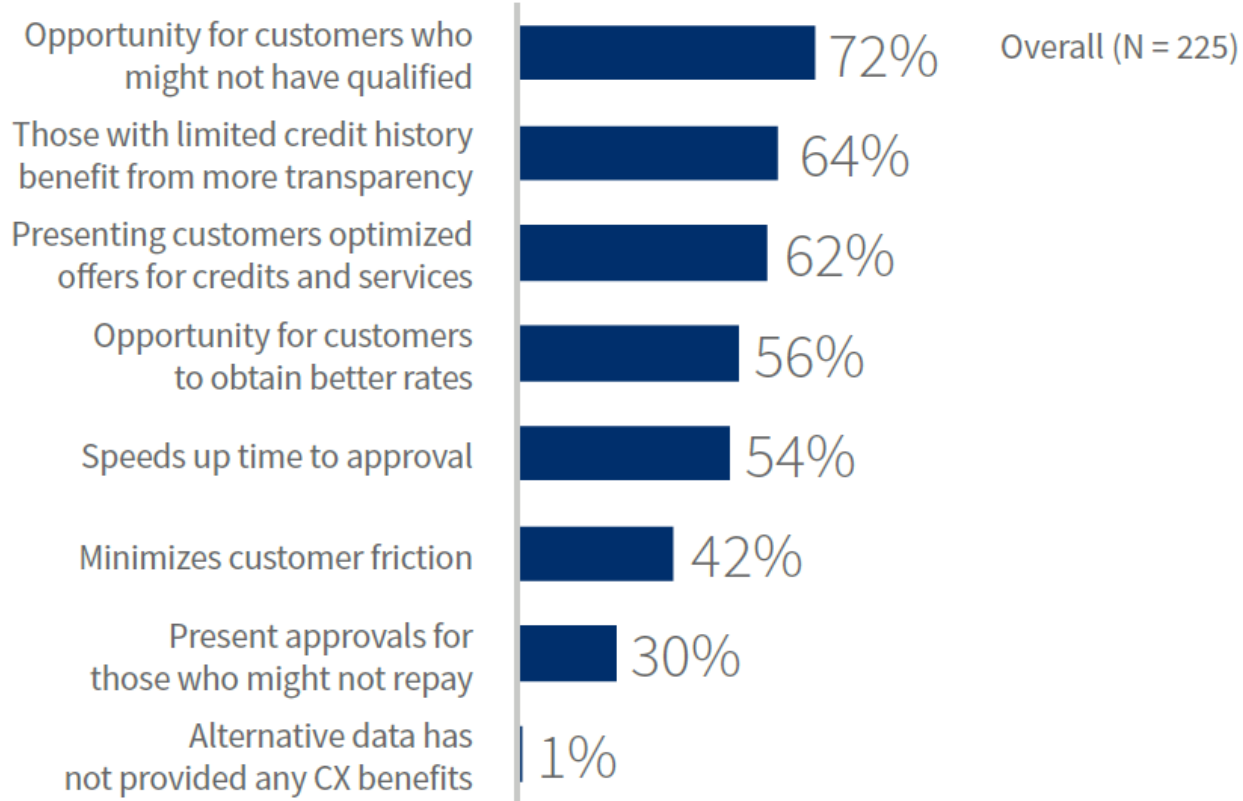
Source: Treasury Dept., *A Financial System That Creates Economic Opportunities*

Trends in alternative data adoption

- Lenders are increasingly using traditional credit scoring, alternative data, or a mix of both.
 - According to a 2022 survey by LexisNexis Risk Solutions, the **“use of alternative credit data in risk management strategies is moving from an innovative approach to an established best practice for financial inclusion.”**
 - A 2022 survey report by Nova Credit found that **“far more midsize lenders — those with 500-1,000 employees — reported using it than larger organizations with 1,000+ employees (80% vs. 39%)”**

Advantages of Alternative Data

How alternative data use has benefited the customer experience



[Source:](#) LexisNexis Risk Solutions 2023 Alternative Data Impact Report

FICO ranking of predictive power of alternative data

	Data	Includes
1	Financial Accounts	<ul style="list-style-type: none">• Credit trade line• Transaction level banking• Demand deposit account
2	Bill payments	<ul style="list-style-type: none">• Telecom• Utility• Rent• Retailers
3	Non-financial	<ul style="list-style-type: none">• Public records• Retail purchase info• Mobile device• Social network

Big Three Alternative Credit Data Scoring Solutions

- **TransUnion** - TruVision Credit Risk
 - Variety of risk models, including **Alternative Credit Risk Models** and **“Blended Data”** models that combine trended credit data with alternative data
- **Experian** – Lift Premium & specialty tools
 - **Combines traditional and expanded FCRA-regulated data sources** to expand your lending universe
 - Alternative credit data as a product
 - **Automotive lending suite** of tools
- **Equifax** – DataX Credit Report
 - **Uses alternative payment types** (checks, cash, money orders, ACH, etc.), and is inclusive of full header, tradeline, performance and payment data



Other Alternative Credit Data Scoring Solutions

- **FICO - Score XD**
 - Developed in partnership with LexisNexis Risk Solutions and Equifax
 - **Uses alternative data in credit risk scoring models**
 - Generates a score on more than 70% of previously unscorable credit applicants, many of whom may have been denied due to lack of prior credit history
- **MicroBilt – I Predict Advantage**
 - Generates consumer **credit reports and risk scores** for businesses that offer short term, rent-to-own, retail, consumer, and **auto finance lending**.
 - **Collects recurring bill repayment data**, such as monthly billing data from rent, utility, phone plans, car insurance, and streaming media subscriptions.

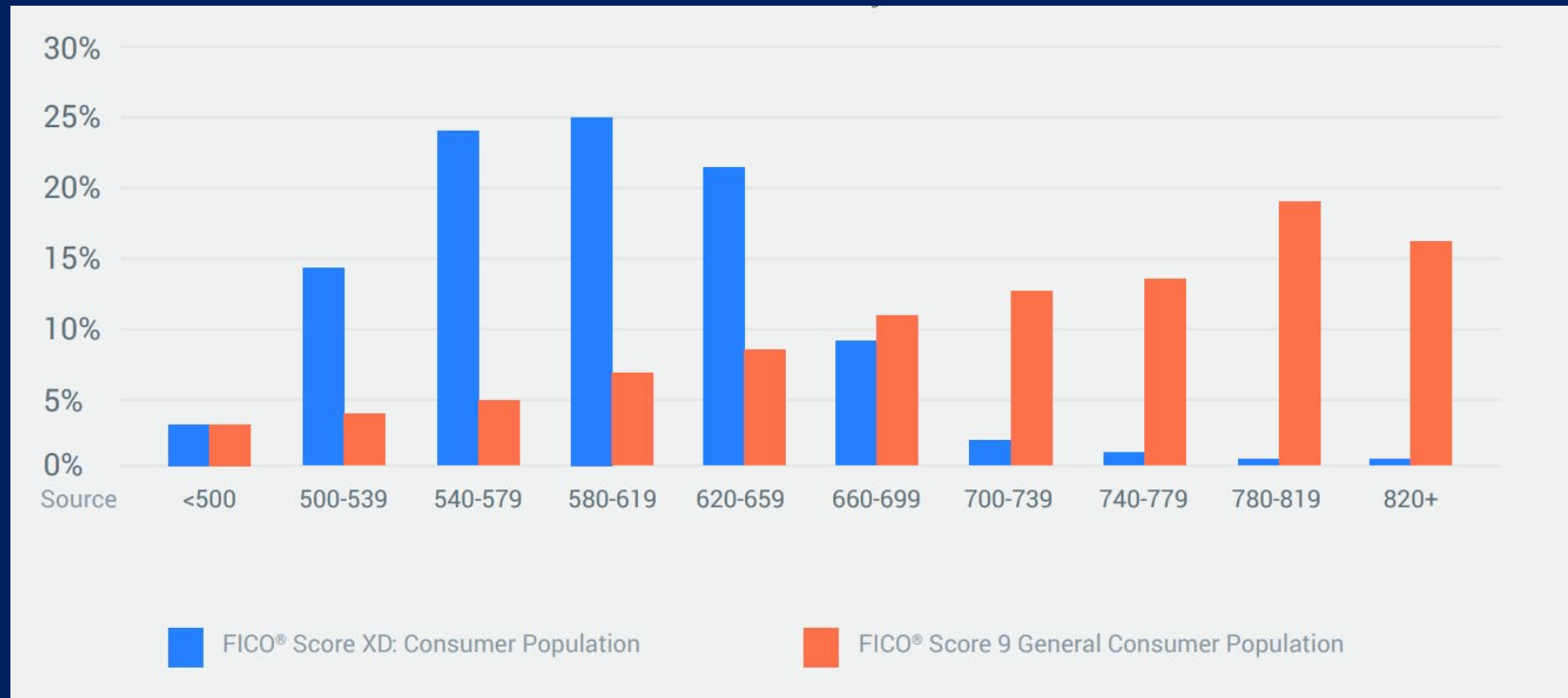
MicroBilt and LexisNexis C.L.U.E. (affiliated with LexisNexis Risk Solutions) are among the CRAs listed on the [CFPB's directory](#)

FICO XD Score

- FICO XD scoring data
 - Pay TV or cable bill history
 - Utility bill history
 - Phone bill history

	92% of Americans have cell phones	2.5% of Americans' credit bureau files include telecom payment data
	61% of Americans pay for utilities	2.4% of Americans' credit bureau files contain utility payment data

9 million unscorable consumers scored 620 or higher with FICO XD



Source FICO

Cashflow Only Intermediaries

- **Mastercard - Finicity**
- **PrismData – CashScore**
 - No credit history is required to calculate a CashScore.
 - Only bank account transaction history (i.e., the digital bank statements) from a consumer’s primary bank account, with at least three months is need to generate a score.
- **Plaid – Assets API**
 - Lenders can verify consumer-permissioned cash-flow data, and up to two years of transaction history, directly from their bank account

Alternative scoring using international credit history

NovaCredit

- **Consumer Credit Offering**
 - U.S. Immigrants may be eligible to Pre-qualify for auto loan through a Nova Credit's partnership using their foreign credit history
- **Credit Passport – B2C product**
 - Available for direct and indirect auto lenders
 - Opens access to international consumer-permissioned credit data.
 - Translates an international credit report into a local-equivalent credit score; tradelines; risk attributes; and other common measurements.



- FICO has partnered with Finicity to analyze transaction account cash flow to calculate a FICO credit score, including
 - How long account has been open
 - Frequency and recency of transactions
 - Total cash on hand
 - History of positive account balances
- However, consumers will only benefit if they apply to lenders using UltraFICO
- Lenders currently using this is limited
- More information is available [here](#)

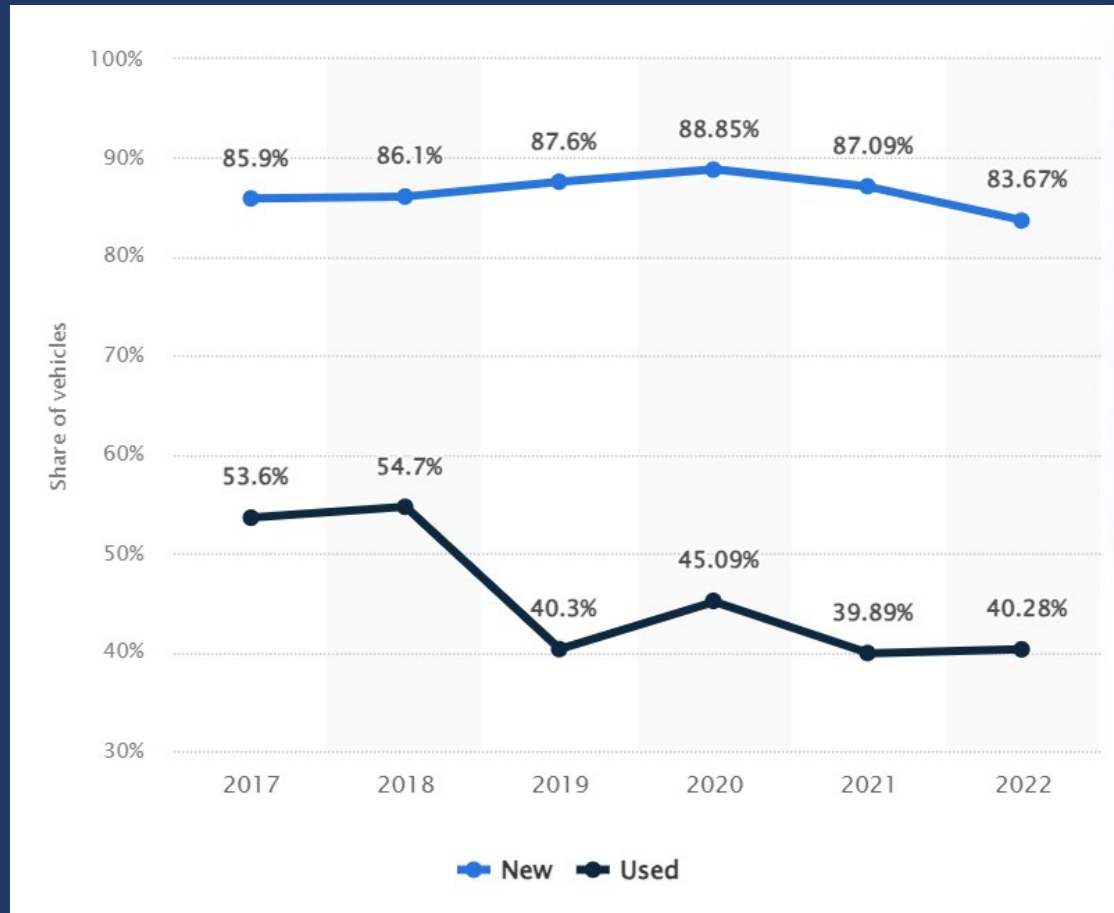
Auto-loan refinancing partnership with opt-in

- **Caribou** (formerly MotoRefi)
 - Consumers participating in **Esusu's rent reporting program may be prequalified** for car loan refinancing with Caribou.
 - **"One of the most valuable and popular credit lines we saw renters open was car loans, with 16,900+ car loans granted to those with new or improved credit."**
- **Esusu** — Consumer-permissioned intermediary
 - **The only intermediary reporting platform to work with both Fannie Mae and Freddie Mac Multifamily**
 - Reports rent payments to CRAs for over 1,400 properties across the country, and over 184,000 units.
 - Includes multifamily and single-family rentals.
 - **Established 27k+ credit scores and 107k+ established new credit lines from enrolled renters.**

Model Validation

- The National Bureau of Economic Research analyzed loans originated using the alternative data loan platform of Upstart, a fintech company.
- The study concluded alternative data loans “lead to better economic outcomes for the borrowers and higher returns for the fintech platform”
- “Upstart model approves 43.4% more Black borrowers and 46% more Hispanic borrowers than a traditional credit scoring model, with approximately 25% lower APRs. Upstart website
- Auto Partners: Acura, Honda, Kia, Lexus, Mercedes-Benz, Mitsubishi, Subaru of America, Toyota and Volkswagen
- Upstart also offers car refinance loans

Share of used and new vehicles with financing in the United States from 2017 to 2022

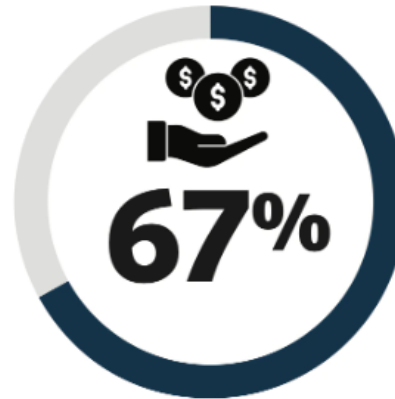


Most of the new vehicles in the United States in 2022 were acquired with financing, while less than half the sale of used cars had financing. Statista

Car Ownership & Opportunities



My car increases my access to my community



Owning a car **opens up income opportunities** that I otherwise wouldn't have



My car increases my ability to help others



My car allows me to **spend more quality time with my family**

■ Agree
October 2021

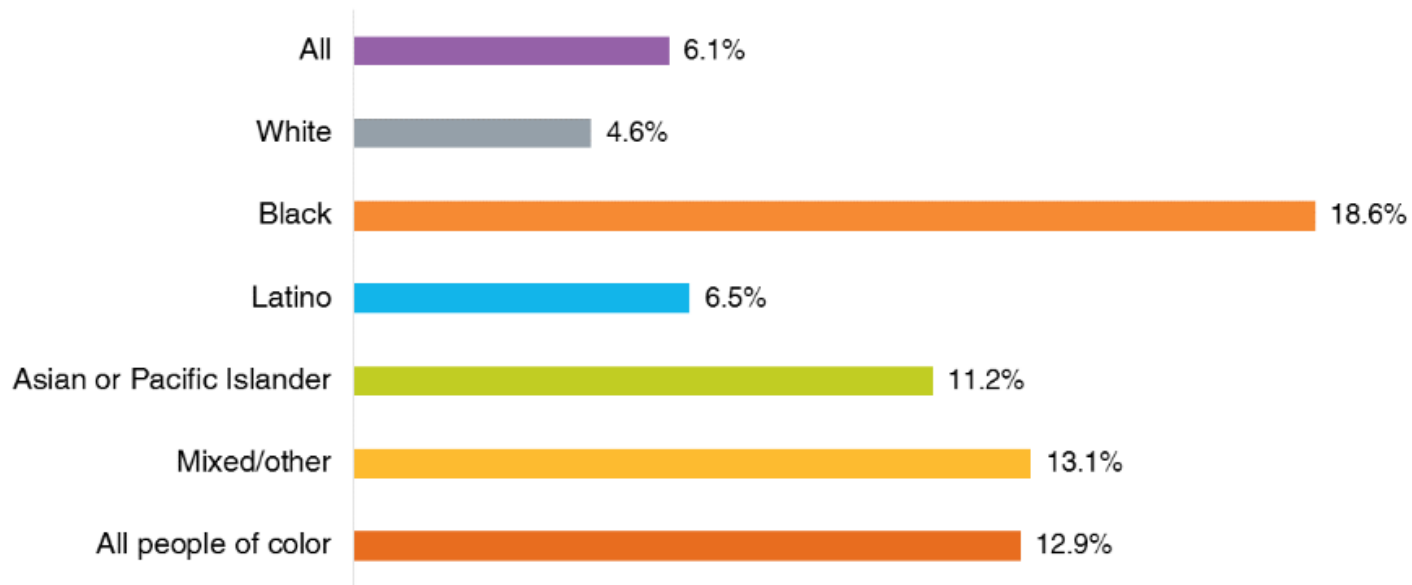
Note:

- 1) Sample size: 2,200 U.S. adults ages 18+. Of the 2,200, 643 have purchased a car in the last six months and are considered "current buyers", and 1,557 self-reported that they're planning to purchase a car within the next two years and are considered "future buyers".
- 2) Among U.S. consumers who strongly agree or somewhat agree with the statement.

Car Ownership Demographics

Black households are 3 times as likely as the average household to be carless

Percent of households without a vehicle by race/ethnicity: Omaha-Council Bluffs, NE-IA Metro Area, 2015



Source: PolicyLink/PERE analysis of the 2015 five-year American Community Survey from the Integrated Public Use Microdata Series (IPUMS).

Consumer Protection Concerns

Compliance remains key

CFPB and Federal Partners Confirm Automated Systems and Advanced Technology Not an Excuse for Lawbreaking Behavior

Tech marketed as “artificial intelligence” and as taking bias out of decision making has the potential to produce outcomes that result in unlawful discrimination

APR 25, 2023



FEDERAL TRADE COMMISSION
PROTECTING AMERICA'S CONSUMERS

Business Blog

Aiming for truth, fairness, and equity in your company's use of AI

By: Elisa Jillson | April 19, 2021

FEDERAL RESERVE

BY JOHN MULLIN

Artificial Intelligence and Bank Supervision

Regulators are gathering information about how banks use AI

Artificial intelligence has come a long way since English mathe-

had deployed AI-based chatbots for customer service, and only 25 percent

questions, pay routine bills, and deliver fraud alerts.



JOINT STATEMENT ON ENFORCEMENT EFFORTS AGAINST DISCRIMINATION AND BIAS IN AUTOMATED SYSTEMS

Fair lending risks of using alternative data in credit decisions

- While alternative data offers great promise to reach the credit invisible, it can also increase fair lending risk
- Some data sets can have disparate impact on minority applicants, such as using an applicant's college
- In 2008, American Express reduced credit card limits for certain customers based on where they shopped
- Facebook allowed landlords to filter advertisements based on race, resulting in an enforcement action for violating the Fair Housing Act

Adverse Action Notices

- The Equal Credit Opportunity Act requires lenders taking adverse action on a credit application to provide a notice explaining the basis for its decision
- If a lender relies on a complex algorithm utilizing many different data points, it may be challenging to explain the basis
- The Consumer Financial Protection Bureau issued [guidance](#) in 2020 to help lenders to address this issue
- Our outreach publication also addressed this issue “[Advanced Topics in Adverse Action Notices Under the Equal Credit Opportunity Act](#)” (*Consumer Compliance Outlook 2021*)

Interagency Statement on the Use of Alternative Data in Credit Underwriting

- The federal banking agencies issued [guidance](#) in 2019 on alternative data
- The agencies encourage responsible use of alternative data, which can expand access to credit and produce other benefits to consumers.
- “Robust compliance management includes appropriate testing, monitoring and controls to ensure consumer protection risks are understood and addressed.”
- The guidance favorably discussed the use of cash flow data

Concluding Remarks

- Credit underwriting is gradually expanding to include alternative data sets
- This epochal shift will allow lenders to offer credit to invisible primes
- In the auto lending space, this will result in more car loans at more favorable rates with better outcomes
- But appropriate guardrails are necessary to mitigate compliance risk

Resources

- [2015 CFPB: Data point: Credit invisibles](#)
- [2016 CFPB : Who are the credit invisibles? How to help people with limited credit histories](#)
- [The Use of Cash-Flow Data in Underwriting Credit: Empirical Research Findings \(FinReg 2019\)](#)
- [Invisible primes: fintech lending with alternative data \(National Bureau of Economic Research 2022\)](#)
- [Keeping Fintech Fair: Thinking About Fair Lending and UDAP Risks \(Consumer Compliance Outlook 2017\)](#)
- [Advanced Topics in Adverse Action Notices under the Equal Credit Opportunity Act \(Consumer Compliance Outlook 2021\)](#)



