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Credit Scoring, FinTech, and Consumer Loans: Why AI Scoring Models Do Not Replace the FICO Score

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What You Need To Know

- The FICO® Score provides a comprehensive view of credit risk derived from information reported by lenders to regulated credit reporting agencies.
- FICO Scores have utility in underwriting, the credit cycle, and portfolio valuations such as loss accounting and asset-backed securitizations.
- Some fintechs recently began building scoring models with alternative, unproven scoring elements to help the un- and under-banked qualify for loans. However, this approach carries increased loan risk.
- There are more responsible ways to leverage alternative data to increase access to credit while minimizing risk. For example, FICO addresses the un- and under-banked scoring options that consider nonregulated data but reduce the inherent lending risk by using factual, regulated data to rank the likeliness of repayment; alternative scoring uses data typically outside the realm of reported credit history.
- The FICO Score and alternative data can work together to broaden acceptance. Still, it is unlikely that some new approaches to alternative scoring will have the necessary perspective to assess loan quality and risk across the span of consumer lending.

FICO brought its renowned FICO® Score to market in 1989 as a solution for lenders to risk rank consumer credit. Industry adoption was rapid because the score helped financial institutions understand and assess the likelihood of repayment. Additionally, consumers could grasp the concept quickly, knowing that the three-digit score reflected their payment history from a wide array of products. The FICO Score relieved underwriters from the arduous review process of examining individual lines of credit reporting data, with a technique that distilled a score encompassing data compiled from a consumer's credit bureau file. The FICO Score created a comprehensive measure of a consumer's risk that lenders and credit managers can use throughout the credit cycle.[i] With a scoring range between 300 to 850, the three-digit range provides a meaningful, easy-to-understand consumer credit quality assessment.

As the process matured, lenders found uses for the score throughout the credit cycle, first to prescreen borrowers, then simplify the underwriting process, and ultimately help drive the entire credit management process. FICO Score logic extends beyond the credit cycle into the investment world. For example, asset managers can price investments in sub-prime automobiles, expecting higher risk when scores cluster below 660, or for auto leases, where better credit quality is needed, with scores typically higher than 720. The ranking supplies a risk perspective that spans the consumer lending gamut as an independent measure.

The FICO Score relies upon data provided by credit bureaus, governed by various regulatory requirements, such as the Fair Credit Reporting Act (FCRA). By using this data, confined to loan repayment history, amounts owed, the length of credit history, new credit applications, and the type of credit history, the score became a universally accepted tool to measure consumer credit risk. Today, the FICO Score continues to be the leading metric used to rate credit risk.

The FICO Score Has Remained Reliable While Integrating Changes in Credit Risk Assessment

The central role of a credit score is to provide a metric that consistently and reliably predicts a consumer's credit risk across economic cycles. Because the FICO Score relies on credit bureau data, some suggest that it can create a chicken-and-egg issue for those consumers with limited or no credit files. The claim indicates that you will not have a FICO Score if you do not have credit, and if you do not have credit, you cannot get a FICO Score. Other claims purport that if you did not have credit in the United States, credit bureau reporting would not typically accept an international credit tradeline, which might impact a FICO Score. As a result, the consumer would not receive a score. While this can often be the case, the claim misses the intention of the FICO

Score, which is to assess risk based on known facts about consumer debt repayment obtained from a consumer credit reporting agency.

Alternative methods to identify consumers entering the credit sales funnel will sometimes add value to credit acquisitions. Adding new variables, either from social media, non-creditors, or alternative sources, are examples of attributes intended to open the underwriting gate. However, when it comes to risk management and objectivity, the FICO Score has a well-honed ability to rank risk across a wide variety of consumer credit products. It also has an established track record to preserve its essential role as the industry standard measure for financial institutions, non-traditional lenders, and investors.

A recent *New York Times* article[ii] expounded on developments in credit scoring and cited a credit card issuer who did not use credit scoring. Instead, the small issuer[iii] claims that it does not even pull credit reports in its underwriting. The Times reports that the issuer analyzes more than 50,000 data points, such as monthly income and spending patterns, savings accounts and stock portfolios.

The article also cites Upstart, an artificial intelligence lending platform that considers more than 1,000 data points inside and outside a consumer credit report. While the model is still in its infancy, the variables are in a state of flux, as evidenced by the company's decision to no longer consider ACT and SAT scores in response to public criticism. However, Upstart continues to include controversial data points such as a person's college, area of study, and employment history.

The state of developments in alternative scoring is bright, and there is undoubtedly room for further advances in scoring. However, it is unrealistic to suggest that alternative scoring replaces the FICO Score. Instead, alternative scoring offers opportunities for lenders to augment traditional bureau data and help embrace new borrowers. When assessing credit or underlying investment risk, the FICO Score stands out as a risk measure that transcends consumer lending products and considers consumers fairly and consistently. Furthermore, to reduce the complexity of underwriting and transparency for consumers, the most prudent approach is to incorporate tested and regulatory-compliant data sources into the FICO Score.

The FICO Score Is Both Stable and Innovative

The objective of a FICO Score has not changed since the firm brought the innovation to the market more than three decades ago. And while the company has pursued further innovations in the years since, it has remained focused on responsibly integrating new data sources while maintaining the metric's core integrity and stability. The most common challenge is to help broaden the pipeline for the 18%[iv] of the United States population referred to as “credit invisible” or un- and under-banked.

Households that are “banked,” defined by the Federal Deposit Insurance Company (FDIC)[v] as “at least one member of the household had a checking or savings account,” take a critical step towards attaining a credit relationship. Unfortunately, consumers without a banking relationship often find themselves stuck in a cash economy or reliant on informal, expensive lenders.

"Models to assess credit risk based on these alternative data hold the potential to increase credit access for households and small firms that do not necessarily have a long credit history, audited financial statements, or collateral, which are traditionally used to underwrite and monitor credit risk."

Loretta J. Mester
President and Chief Executive Officer
Federal Reserve Bank of Cleveland
November 9, 2020

Consistent with FICO's leadership in risk scoring are innovations in creating an entry point for those without scorable credit histories. For example, while FICO Score 8 (base score) remains the most used tool to "predict the likelihood of not paying as agreed in the future on any credit obligation, whether it's a mortgage, credit card, or other credit product,"[vi] the firm offers industry-specific scores, which "incorporate the predictive power of FICO Scores while providing lenders a further refined credit risk assessment tailored to the type of credit the consumer is seeking."

The UltraFICO® Score[vii] expands the standard FICO Score inputs by empowering consumers to link checking, savings, or money market accounts to their FICO Scores. The firm estimates that 15 million people in the United States who do not have a credit score because they lack sufficient credit history can benefit from UltraFICO Score.

FICO® Score XD[viii] also provides new inputs to the standard FICO Score. This model, developed by FICO based on alternative data from LexisNexis Risk Solutions and Equifax such as mobile and landline phones, utilities, and subscription television to help score more consumers.

Another innovation in FICO Scores comes from consumer-contributed data. Experian now offers a product that "allows users to contribute their on-time cell phone, video streaming service, internet, and utility payments directly to their Experian credit report."[ix] As a result, Experian estimates that previously invisible credit files receive a score in the range of 665, based on a statistically relevant sample studied in December 2021.

These innovations are examples of how FICO keeps its scoring models relevant while using reliable data and supporting a scoring technique that stays true to its original design: "identifying on behalf of our bank customers which consumers are likely to pay their debts."[x]

Credit Bureau Data Form the Solid Foundation of the FICO Score

In a world of big data, it can be challenging for analytic developers to identify which data sources are responsible and reliable and which are not. For example, credit bureau data, the underlying information used to calculate a FICO Score, are highly regulated and subject to Consumer Financial Protection Bureau (CFPB) and the Federal Trade Commission (FTC) standards. According to a study by the Federal Reserve, "Each consumer credit record contained possibly more than 350 variables that described consumer credit usage and performance."[xi]

Credit reporting agencies receive updates from creditors using a standardized industry data format, known as Metro 2.[xii] The Consumer Data Industry Association,[xiii] a trade group, requires the same format for all updates to the three primary credit reporting agencies: Equifax, Experian, and TransUnion. The Fair Credit Reporting Act (FCRA) is the underlying regulation that governs credit bureau information.[xiv]

One challenge credit reporting agencies face is maintaining data integrity. Consumers have a right to accurate credit bureau data, and lenders are responsible for concise records. In addition, regulators are highly sensitive to credit bureau accuracy and regularly report on data velocity and quality.

A 2020 report[xv] by the Consumer Financial Protection Bureau (CFPB) indicated the significance of bureau updating volume. For example, in March 2020, a typical month, there were 1,011 million tradeline updates, 453 million coming from credit cards, 212 million from retail revolving (private-label) credit cards, 112 million from student loans, 94 million from auto finance, 70 million from mortgages, and 60 million from other categories.

Consumer complaints on reported bureau data persist in the industry, with valid and spurious claims. As a result, regulators focus intensely on credit reporting accuracy. The Consumer Financial Protection Bureau reports on accuracy issues, resolutions, and consumer concerns in an annual report, required by section 611(e)(5) of the Fair Credit Reporting Act.[xvi]

Because the tradeline gets suppressed when a consumer disputes a particular reporting issue, FICO Scores are more immune from data reporting flaws.[xvii] Sticking to the clinical nature of credit reporting is an advantage the FICO Scores have over alternative and proprietary scores. At the same time, a field of regulatory agencies and consumer protecton laws work to ensure the accuracy and security of the data sources that input into the FICO Score, while those who add social media data or other unprotected informaton are open to a wide range of vulnerabilites, from bias and fairness to accuracy and privacy. Harnessing data governed by regulators is one thing. Using black boxes or significant, unregulated data sources is another. In the context of FICO Scores, the solution is simple. If the consumer challenges the information, the record is suppressed and not scored. However, big data faces a broader challenge.

Regulators Have Shown a Growing Interest in Alternative Scoring in Consumer Finance

Some financial institutions use proprietary scoring, including using the FICO Score as an element to enhance an internal business model. This strategy works because the FICO Score can summarize the overall account-level risk. In contrast, the institution's proprietary score can help enhance a broader customer view, including behavioral data, customer contact, or other consumer facets.

Proprietary scoring differs from alternative credit scoring because alternative data, by definition, applies information not found in credit files, such as driving records, utility payments, educational history, and social media. Moreover, with some firms claiming up to 50,000 data points in use, it is relatively easy to see how good intentions might become clouded.

We believe millions of these credit invisibles could benefit from homeownership and other wealth-building opportunities if their credit worthiness could be assessed by considering their full financial record.

Remarks by Grovetta Gardineer
Senior Deputy Controller for Bank Policy Supervision
Office of the Comptroller of the Currency, 2/23/2021

Expanding opportunity to the unbanked is a challenge, and regulatory agencies have been receptive to recent developments. Regulators acknowledge alternative data as a potential tool to help lenders embrace the un- and under-banked. In a joint statement by the Board of Governors of the Federal Reserve System, the Consumer Financial Protection Bureau, the Federal Deposit Insurance Corporation, the National Credit Union Administration, and the Office of the Comptroller of the Currency,[xviii] the agencies acknowledged advancements in alternative data for credit underwriting, fraud detection, marketing, pricing, servicing, and account management.

The agencies recognized the importance of enhancing data and analytic methods but reinforced the importance of consumer protections, including "fair lending laws, prohibitions against unfair, deceptive, or abusive acts or practices, and the Fair Credit Reporting Act."[xix]

Another sign of growing regulatory acceptance of alternative data comes from the CFPB. In their first decision, under the No-Action Letter Policy,[xx] the CFPB's Office of Innovation approved fintech Upstart's application[xxi] to integrate alternative scoring and artificial intelligence into its credit underwriting function. CFPB's approval[xxii] carries a requirement that "Upstart will share certain information with the CFPB regarding the loan applications it receives, how it decides which loans to approve, and how it will mitigate risk to consumers, as well as information on how its model expands access to credit for traditionally underserved populations."

Finding Lending Opportunities and Assessing Risk Are Two Different Things

Opening the door to expand the scope of qualified credit applicants does more than achieve a social goal. It creates opportunities for consumers to use credit in their daily lives, build wealth, and achieve their financial dreams. It also creates opportunities for lenders, both for the original product and future credit and savings instruments.

Lenders have responsibilities to comply with a wide range of policies that affect credit quality, including ensuring their process operates within safety and soundness parameters,[xxiii] as defined by the Office of the Comptroller of the Currency (OCC) in their reporting for loan losses. In addition, with the recent change in loan loss accounting, stemming from the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), lenders must report their risk using a different method, under an accounting standard known as Current Expected Credit Loss (CECL).

Instead of reporting losses on an incurred basis, the Financial Accounting Standards Board (FASB) requires a risk assessment of account-level data, a task for which the FICO Score is well-suited. It is not likely that alternative scoring used to open the lending funnel could adequately fill this need.

Risk managers can use the FICO Score to grade account-level performance at underwriting or throughout the credit cycle to build a worthwhile response to the filing requirement.

This risk model translates well into asset-backed securitizations (ABS). ABS allow banks to remove accounts from their financial books and share revenue opportunities with investors. Lenders create trusts which become available for investments by sophisticated and institutional investors. Lenders who make those trusts benefit by removing the risk from their books in favor of fees for servicing the trust. Investors generally yield higher returns from those trusts and are relatively protected by enhancements that often over secure the investment.[xxiv]

The Securities and Exchange Commission (SEC) regulates securitizations, and the Credit Agency Reform Act of 2006[xxv] established standards for nationally recognized statistical rating organizations (NRSRO). These firms are A.M. Best Rating Services, DBRS Morningstar, Fitch Ratings, Kroll Bond Rating Agency, Moody's Investor Service, and S&P Global Ratings. The NRSROs supply insight for those investors seeking to participate in ABS.

Asset-Backed Securities Rely on FICO Scores to Measure Risk

In 2021, a significant number of filings, more than 97%, showed FICO Score usage to grade receivables. Filings by four lenders, all non-insured financial institutions, stood out as the few asset-backed trusts that do not specifically rely upon the FICO Score when credit rating agencies review the offerings. Two trusts that stood out were the Opportun Issuance Trust 2021-C and the Pagaya AI Debt Selection Trust 2021-5.

Proprietary Credit-Scored Trust

World Financial Network Credit Card Master Note Trust (2019-C) (Alliance Data Systems)

This filing is an example of an ABS trust that used a traditional proprietary score rather than the FICO Score or an alternative score. Therefore, it is interesting that CRA Rating Agency Fitch downgraded the Master Note Trust on January 20, 2021.[xxvi] The Negative Rating is an unusual action for credit card asset-based securitization from a major issuer.

Alliance Data Systems Corporation, the private and branded card issuer, sponsors their credit card business through Comenity Bank, previously known as World Financial. Its latest ABS Trust came to market in September 2019, with its 2019-C filing valued at $411 billion.

FICO Scored portfolios are typically the norm for asset-backed receivables, especially for those trusts collateralized by credit cards. According to Mercator Advisory Research, credit card issuers brought 48 trusts valued at $29.8 billion in 2019. Top issuers included Alliance Data, American Express, Bank of America, Capital One, Discover, and Synchrony. Like ADS, Synchrony markets private-label and branded credit cards. It is unknown if there were any other ABS downgrades for issuings during that year, other than the proprietary scored World Financial Network Credit Card Master Note Trust (2019-C).

Even before the recent economic impacts caused by the coronavirus pandemic, WFNCCMNT was already experiencing worse performance than other prime and retail credit card platforms. Gross charge-offs performance has been volatile over the past 12 months, ranging from 5.09% to the most recent report period of 11.87% as of the January 2021 distribution date. Concurrently, early-stage delinquencies have also fluctuated and increased in the past few months since the recent lows driven by pandemic payment assistance programs.

Fitch Rating Action Commentary, 2021

Artificial Intelligence and Credit Scoring as the Exclusive Scoring Option

Pagaya AI Debt Selection Trust 2021-3.

The Pagaya trust is one of the few that do not use the FICO Score, as a presale analysis by credit rating agency Kroll (KBRA) shows. In addition, the firm does not originate the loans. Instead, it uses "data analytics and artificial intelligence to review and buy unsecured consumer loans from marketplace lending platforms, according to the Report.[xxvii]

The firm is a tertiary player in consumer lending. It does not market directly, so it is impossible to assess financial inclusions impactfully. However, the Kroll presale report notes that "historical data is the best indicator of risk" and that the "limited performance history is a key risk relating to this transaction." The portfolio included a "limited number of vintages which completed a full loss cycle for 36-month loans" and "no vintages completed a fill loss cycle for 60-months."

The private firm was recently acquired by EJD Acquisitions Corp,[xxviii] a newly formed company based in the Cayman Islands.

Artificial Intelligence and Credit Scoring: AI in the front end, FICO at trust valuation

Upstart Securitization Trust 2021-5

According to Upstart's 2021 10-Q filing[xxix] with the SEC, the firm uses "modern data science and technology to the process of originating consumer credit." In addition, the Company helps bank partners originate credit by providing them with a proprietary, cloud-based, artificial intelligence lending platform. The success in this strategy is evident in the company's growth, where they report to the SEC that loan volumes "increased 176,983 in the nine months ended September 30, 2020, to 819,386 in the nine months ended September 30, 2021, representing a compound annual growth rate of 363%."

Investor documents indicate that the firm relies heavily on FICO Scores for credit grading their trusts, although they use their AI model at the lending point. This strategy is effective because Upstart takes a broader approach to book loans, which might not have sufficient history for the FICO Score. Still, when they go to the securities market, their portfolio gets validated through the FICO Score. In Upstart's strategy, they can either underwrite with standard FICO Scores, augment their FICO Scored accounts with their AI scoring model, or solely use their AI scoring model. But when they go to market with investors, the FICO Score is the basis for the credit grading.

Upstart makes no secret about the inherent risk of their AI-driven score model. In their 2021 10-Q filing, they say: "Our AI models have not yet been extensively tested during down-cycle economic conditions. If our AI models do not accurately reflect a borrower's credit risk in such economic conditions, the performance of Upstart-powered loans may be worse than anticipated."

The Upstart Securitization Trust 2021-5 presale report, produced by CRA DBRS,[xxx] shows the firm reports an average weighted FICO Score of 669. It is fair to assume that the firm uses its artificial intelligence to fill the sales funnel but keeps its strategy to risk assess the receivable with the FICO Score, an ideal approach for lenders looking to address the market.

There is no assurance that our AI models can continue to accurately predict loan performance under adverse economic conditions. If our AI models are unable to accurately reflect the credit risk of loans under such economic conditions, our bank partners, investors in our loan funding programs and we may experience greater than expected losses on such loans, which would harm our reputation and erode the trust we have built with our bank partners and investors in our loan funding programs.

Upstart Holdings, Inc
September 30, 2021, 10-Q Filing

FICO Remains the Industry Standard in Credit Scoring

Credit scoring is essential for consumer lending because it supplies a trustworthy, consistent method to grade risk and returns. The FICO Score, which has provided a reliable ranking of consumer credit quality through economic cycles since 1989, relies entirely on inputs from certified credit reporting agencies. Since it uses credit reporting agency data, some claim that establishing a score is burdensome for some consumer segments. However, developments by both FICO and fintechs suggest that using alternative data will open doors for many alongside the rigors of the standard FICO Score. There are clear examples of using untraditional data elements to help many of the credit invisible become visible.

The alternative scoring model works at several fintech lenders and suggests that the method might be a way to add customers. However, its lack of spanning the entire credit spectrum to determine repayment probability requires regulated data across all credit types.

A lender using FICO Scores can operate without using alternative data, but Lender Custom Scores cannot work effectively without using a FICO Score. For this reason, the development of new iterations of the FICO Score, including alternative data, shows particular promise. This conclusion is particularly relevant when it comes to grading risk, presenting a reliable view of portfolio condition to regulators, and valuating receivables for investors.

End Notes:

[i] What is a FICO Score and why is it important? | myFICO | myFICO
[ii] No Credit Score? No Problem! Just Hand Over More Data. - The New York Times (nytimes.com)
[iii] Tomo Credit Card - Learn more about us
[iv] The Fed - Economic Well-Being of U.S. Households (SHED) (federalreserve.gov)
[v] FDIC_2019_SurveyReport-book
[vi] FICO Score 8 and Why There Are Multiple Versions of FICO Scores| myFICO | myFICO
[vii] Introducing the UltraFICO™ Score | Ultrafico
[viii] FICO, LexisNexis® Risk Solutions and Equifax® Partner to Expand Access to Credit with Debut of FICO® Score XD | FICO
[ix] Experian Go™ Program Will Allow Millions of Credit Invisibles to Start Building Credit in Minutes | Business Wire
[x] Mercury News interview: Will Lansing, president and CEO of FICO – The Mercury News
[xi] An Overview of Consumer Data and Credit Reporting (federalreserve.gov)
[xii] Metro 2® Format for Credit Reporting - CDIA (cdiaonline.org)
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[xv] Credit Bureau Accuracy, Disputes & Trends: More than Just Credit Cards (paymentsjournal.com)
[xvi] Annual report of consumer and credit reporting complaints: An analysis of complaint responses by Equifax, Experian, TransUnion | Consumer Financial Protection Bureau (consumerfinance.gov)
[xvii] Disputing Errors On Your Credit Reports | FTC Consumer Information
[xviii] Interagency Statement on the Use of Alternative Data in Credit Underwriting (occ.gov)
[xix] Ibid
[xx] Policy on No-Action Letters (consumerfinance.gov)
[xxi] Microsoft Word - 91486903_1 (consumerfinance.gov)
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[xxx] https://www.dbrsmorningstar.com/

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