FICO™

A new highly predictive FICO® Score for an uncertain world

Lenders gain a 5%–15% predictive boost to manage business and control losses

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As delinquency levels increase and consumer behavior changes, the need for strong predictive tools has never been greater.

Consumers, feeling the full impact of financial challenges, may attempt to manage their situations with unhealthy credit behaviors. Early identification and action with a score adjusted for current market trends can benefit both consumers and lenders, enabling proactive intervention, and ultimately, preserving revenues.

Under increasing scrutiny, lenders also require risk solutions that support government regulations. And while lenders are asking for better tools to mitigate losses, especially around new-to-credit and nonprime populations, resource constraints dictate that any new implementation be accomplished with minimal effort and disruption.

FICO analyzed recent consumer repayment behavior and predictive trends as part of the FICO® 8 Score redevelopment. The new FICO® 8 Score is available now at all three major US credit reporting agencies. Contact us at cbhelpline@fico.com *for more information.*

These issues were top-of-mind as we approached our latest redevelopment of the FICO® Score. To build the FICO® 8 Score, we explored:

- Have consumer repayment behaviors changed, and if so, how can we leverage this to improve risk prediction?
- How can we boost performance for key consumer segments?
- Could we continue supporting compliance while protecting lenders from authorized user abuse?
- How can we facilitate a smooth transition to the new score?

This paper first reveals consumer behavior changes and predictive trends from the score redevelopment, then shows performance and other improvements for the FICO® 8 Score.

» INSIGHTS

» How consumer behavior is changing

FICO regularly redevelops the FICO® Score to reflect changes in credit reporting data, consumer credit behavior and lending practices. For each score update, FICO analyzes data for millions of consumers and hundreds of predictive variables.

With each redevelopment, FICO undertakes analysis to understand how the predictive variables contribute to the score's predictive power and to observe how these dynamics may have changed with the more recent data.

In this paper, we'll compare predictive variables from TransUnion data samples used to build the current FICO® Score to the data used for the FICO® 8 Score redevelopment. We look at both the distribution of each variable—what percent of consumers fall into each category—as well as how consumers with various usage and delinquency patterns are performing.

The most notable findings include:

- **Patterns are stable even though consumers are more risky.** Overall, predictive trends show that consumers are more risky and carry higher revolving utilization. However, general risk patterns—what constitutes higher or lower risk—remain relatively stable. This means that existing FICO® Scores remain effective at measuring risk, although there are opportunities to leverage subtle changes to further boost score performance.
- **More consumers have 90+ day delinquencies.** More consumers are 90+ days delinquent on two or more trade lines, with 29% more consumers 90+ past due on four or more trade lines. Consumers with four or more 90+ trade lines also show greater risk, while there's a slight risk decrease for consumers with fewer 90+ trade lines.
- **29% more consumers have no trade lines 75% or more utilized.** This trend may reflect the fact that many consumers have higher credit lines than before. At the other end of the spectrum, more consumers have 3 or more highly utilized bankcards, but these consumers remain at relatively the same risk level. Interestingly, there are 15% fewer consumers with 1–2 trade lines 75% utilized, but consumers in this category are riskier by 23%. Otherwise, risk patterns have remained stable—consumers get riskier as the number of highly utilized bankcards increases.[1]

FICO® 8 Score ROI

Accounts Booked per Year	**100,000**
Bads Accepted Currently at Score Cutoff	**2,400**
Bads Accepted Using FICO® 8 Score at Same Cutoff	**2,150**
Bads Avoided by FICO® 8 Score	**250**
Average Loss per Bad	**$4,000**
Total Losses Saved by Decline	**$1,000,000**
Estimated Implementation Expense	**$300,000**
Estimated Savings After Implementation Costs	**$700,000**
Estimated First-Year ROI	**2.33**

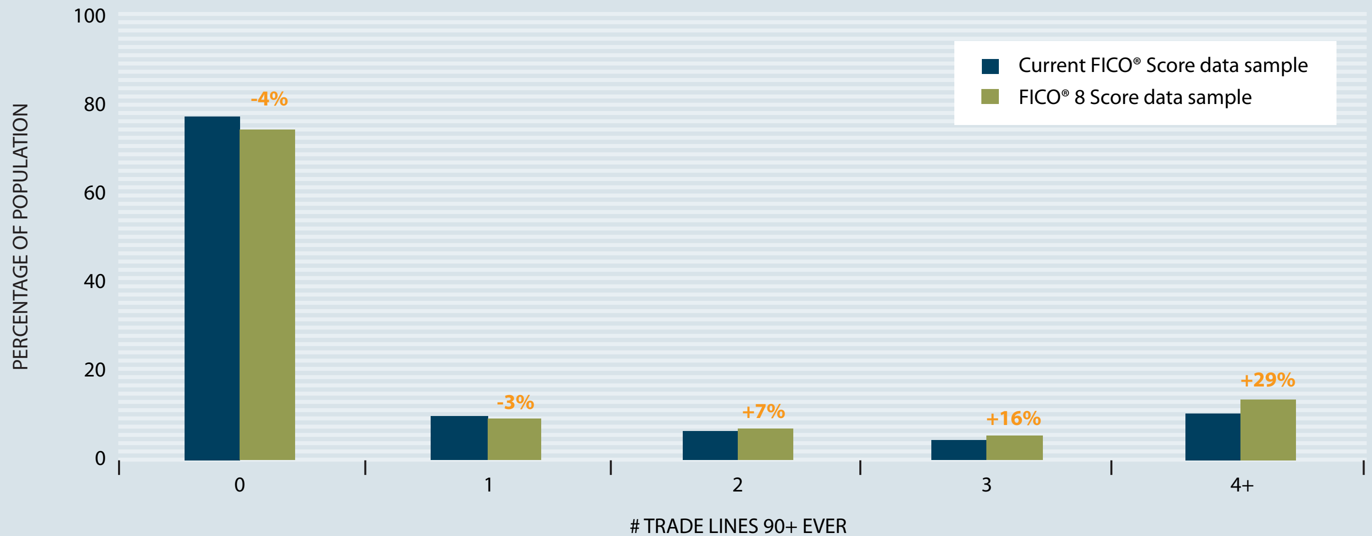
This ROI calculation shows how the FICO® 8 Score can lead to an annual reduction in losses of $1 million per 100,000 booked accounts and a 2.33 first-year ROI, based on FICO calculations. This is due to the improved risk detection of the FICO® 8 Score. (Actual implementation expenses will vary by lender, but our assumptions include costs for internal programming, data validation, operational change and analytic investment.)

[1] *This trend may shift as lenders aim to lower exposure by reducing credit lines; thus, FICO evaluates revolving credit usage using multiple approaches to ensure usage changes are captured across related variables.*

Figure 1: Evaluating 90+ delinquent trade lines

Predictive Variable Distribution

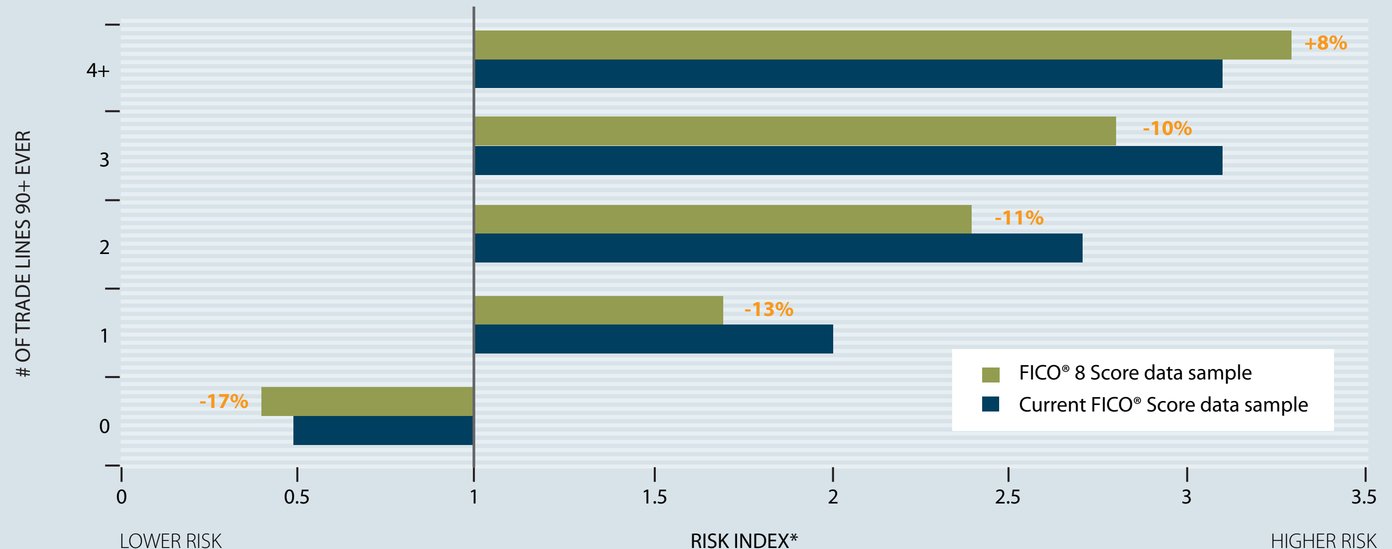
Trade Lines 90+ Days Past Due Ever—% change



Trend data shows that the distribution of consumers experiencing 90+ delinquencies is shifting, with 29% more consumers having four or more trade lines that are 90+ days past due.

Changes in Variable Risk Pattern

Trade Lines 90+ Days Past Due Ever—% change



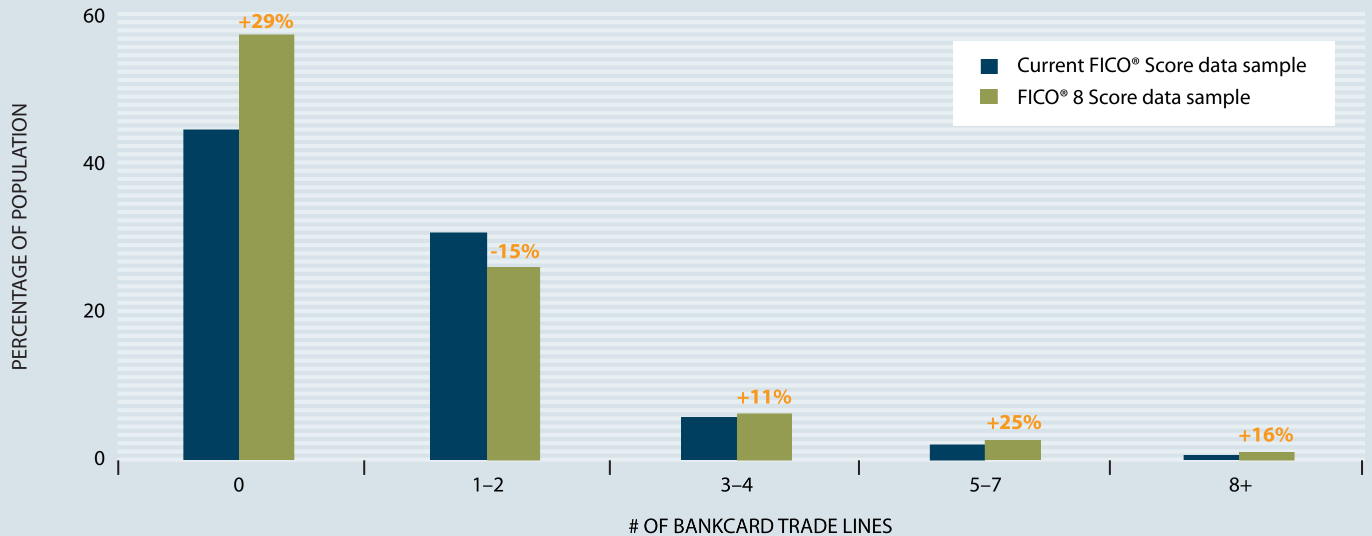
Having 4+ credit lines with 90+ days past due is 8% more risky than during the last FICO® Score refresh. Consumers with no 90+ trades are significantly less risky, showing a 17% decrease. While consumers with 2 and 3 90+ trade lines represent slightly less risk than before, having multiple serious delinquencies is still very risky.

* 1 = Risk Neutral—represents average population risk
Data provided by TransUnion, analysis conducted by FICO

Figure 2: Evaluating bankcards 75% utilized

Predictive Variable Distribution

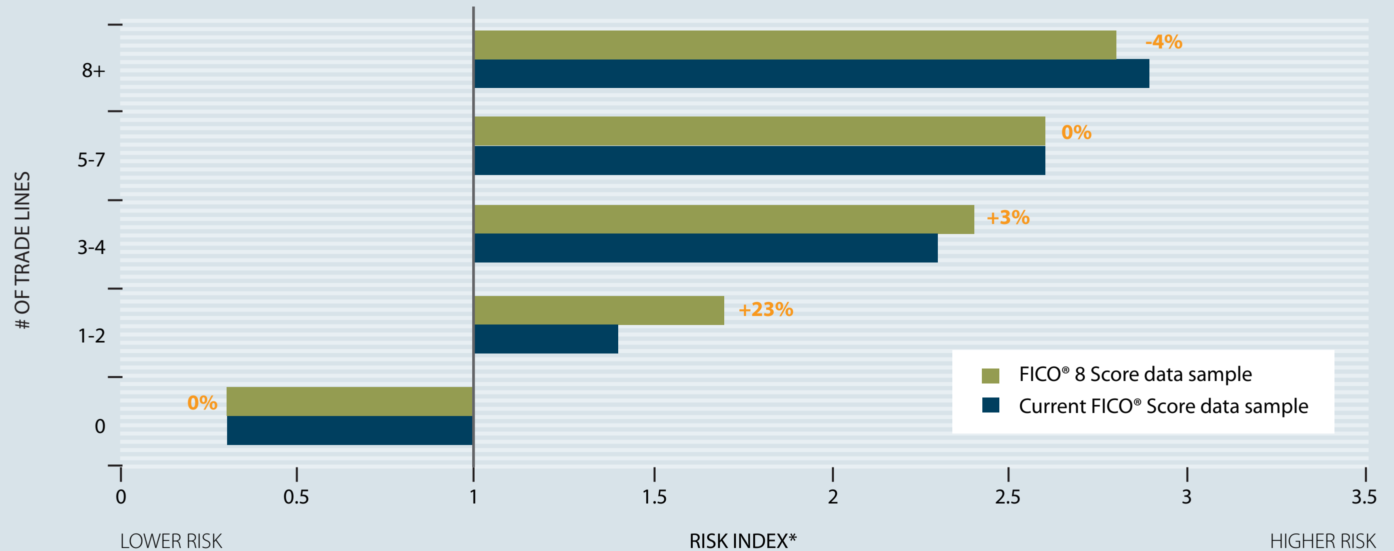
Bankcard Trade Lines 75% or More of Amount—% change



Looking at utilization, we see more consumers at the extremes—more consumers with no 75% trade lines, and more consumers with three or more 75% trade lines. We also see there are 15% fewer consumers with 1–2 trade lines.

Changes in Variable Risk Pattern

Bankcard Trade Lines 75% or More of Amount—% change



Consumers with 1–2 trade lines 75% utilized are riskier by 23%. Otherwise, risk patterns have remained stable—consumers get riskier as the number of highly utilized bankcards increases.

* 1 = Risk Neutral—represents average population risk
Data provided by TransUnion, analysis conducted by FICO

We also observed:

- **More consumers have collection agency accounts.** More consumers have at least one collection account, with a substantial increase—72% more consumers—having two or more collection accounts. Having more collections accounts is still riskier, but the risk for having a collection account has slightly decreased.
- **More consumers have recent inquiries.** More consumers have 3 or more inquiries in the prior 0–11 months. Credit shopping continues to reflect risky behavior, with more inquiries equaling greater risk relative to the reduced importance inquiries had in the recent past. Nevertheless, lenders can reassure their customers that 1–2 inquiries per year, after FICO® Score inquiry deduping, has a negligible impact on risk.
- **Slightly more consumers are carrying balances.** About 6% more consumers have balances on three or more trade lines. Carrying no more than a few accounts with balances remains relatively risk-neutral, but as expected, risk increases as the number of trade lines with balances increases. Lenders should continue to advise customers to use credit in moderation.
- **Consumers have more trade lines.** Looking at total number of trade lines (including closed accounts), 19% more consumers have 18 or more trade lines. Since this segment remains relatively low risk, this trend is likely a reflection of a maturing credit population with thicker files, as well as more credit-savvy consumers.

FICO® Scores are built to remain robust as variable patterns evolve. We categorize similar data features (e.g., delinquency and credit usage) in multiple ways to provide a balanced, 360° view of risk. Thus, as consumers respond to a challenging economy, the FICO® 8 Score is able to retain performance integrity despite subtle changes in credit repayment behavior.

It's important to note that credit performance today is shifting due to market pressures on behavior not measured by the FICO® Score—such as unemployment or falling home values.[2] FICO recommends that lenders always consider a broad view of risk by incorporating as much accurate information as possible in their underwriting and customer management decisions.

[2] *Our Insights white paper "Are today's market pressures reshaping credit risk?" discusses this topic in greater detail. It is available at* www.fico.com/insights.

» INSIGHTS

» Focus on performance

Data analysis, including evaluation of predictive variables, was only one crucial step as we set out to build a stronger FICO® Score. Our focus was to improve score performance, and by leveraging powerful new features, the FICO® 8 Score shows predictive increases of more than double what was typical in prior updates.

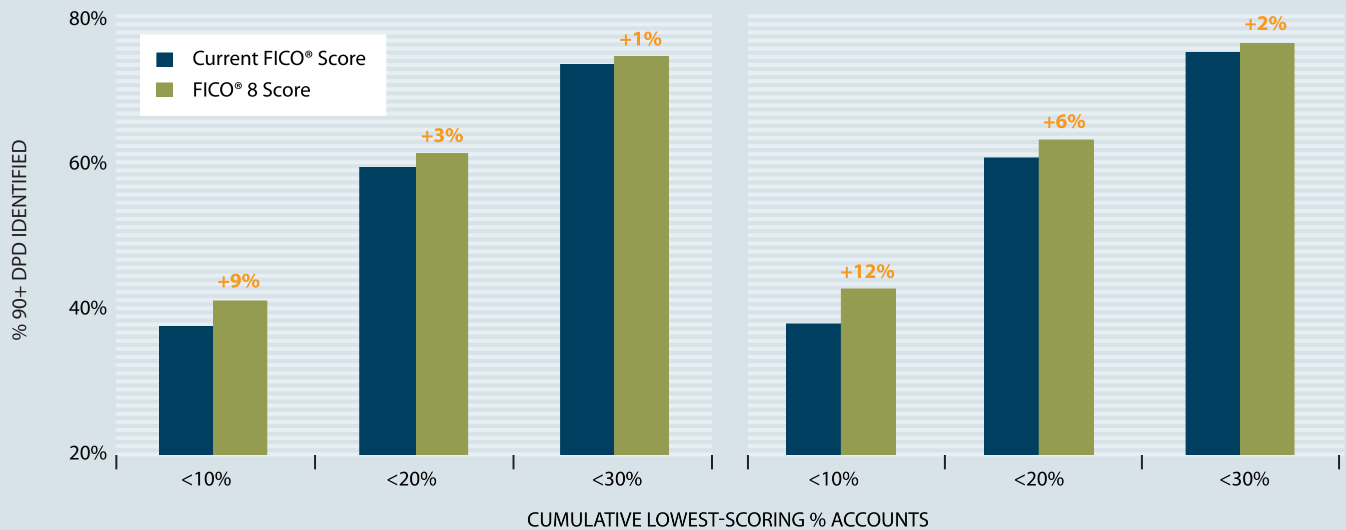
The largest predictive improvements of 5%–15% occur among new accounts—particularly mortgage, bankcard and auto—and nonprime consumers across industry segments. Figure 3 illustrates validation results for new mortgages and bankcards.

Figure 3: Improve performance in new mortgages and bankcards

FICO® 8 Score Redevelopment Results

New Accounts: Mortgage—% improvement

New Accounts: Bankcard—% improvement



FICO® 8 Score validation results show strong lift, with the largest improvements in new and nonprime accounts. Here, we see a 9% improvement in identifying "bads" (90+ delinquencies) among new mortgage accounts and a 12% improvement for new bankcard accounts, in the lowest-scoring 10% of consumers.

DPD = Days Past Due

Data provided by TransUnion, analysis conducted by FICO

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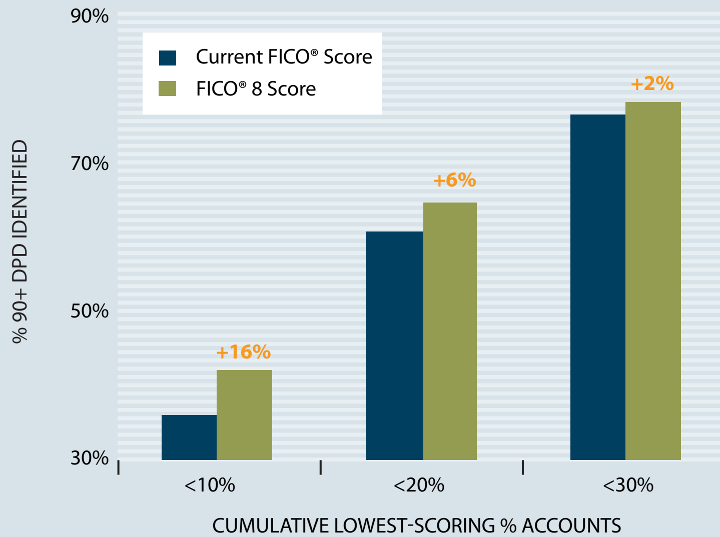
Figure 4: Boost nonprime mortgage securitization

FICO® 8 Score Redevelopment Results

Existing Accounts: Mortgage Nonprime—% improvement



FICO® 8 Scores show a 16% improvement in moving the higher-risk mortgage consumers to lower scores. This indicates that the score can better assess distressed consumers. The chart reflects 24-month mortgage performance for consumers with at least one 90+ delinquency on *any* credit account prior to score date.

DPD = Days Past Due

Data provided by TransUnion, analysis conducted by FICO

Figure 4 results show improved performance for existing nonprime mortgages—consumers with at least one 90+ delinquency prior to score date. Mortgage servicers using the FICO® 8 Score can better identify higher-risk customers who may require alternative treatments.

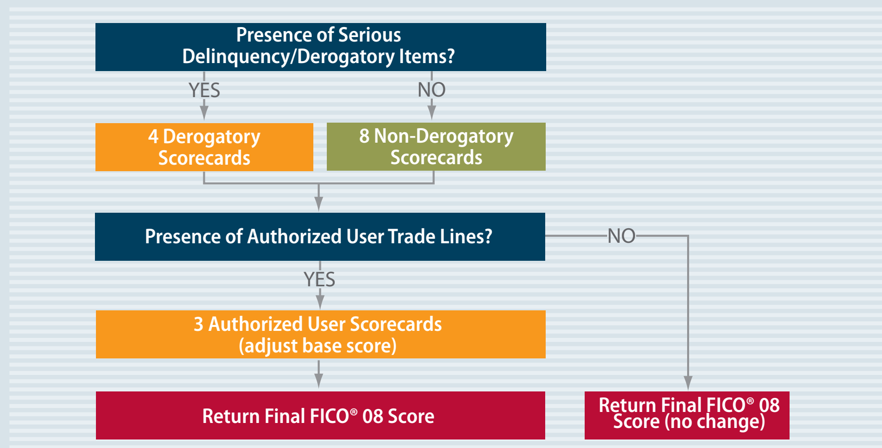
Reevaluating consumer segments

The increased predictive strength is a result of powerful new features built into the score—in particular, sharper scorecard segmentation and a refined risk performance classification.

The FICO® 8 Score includes 12 distinct scoring models in the core system, increased from 10 in the previous version. As a result, the new scores deliver more precise evaluation of consumer segments (see Figure 5).

This segmentation allows for more accurate risk assessment of consumers with previous credit problems, due to more refined segmentation for accounts with serious delinquencies and derogatory items. The FICO® 8 Score continues considering authorized user information in support of regulatory requirements.

Figure 5: New segmentation allows for sharper risk evaluation



Improved segmentation in the FICO® 8 Score allows for more accurate risk assessment of consumers with previous credit problems. There are also enhancements to shifts in length and depth of credit histories among consumers with relatively clean credit histories.

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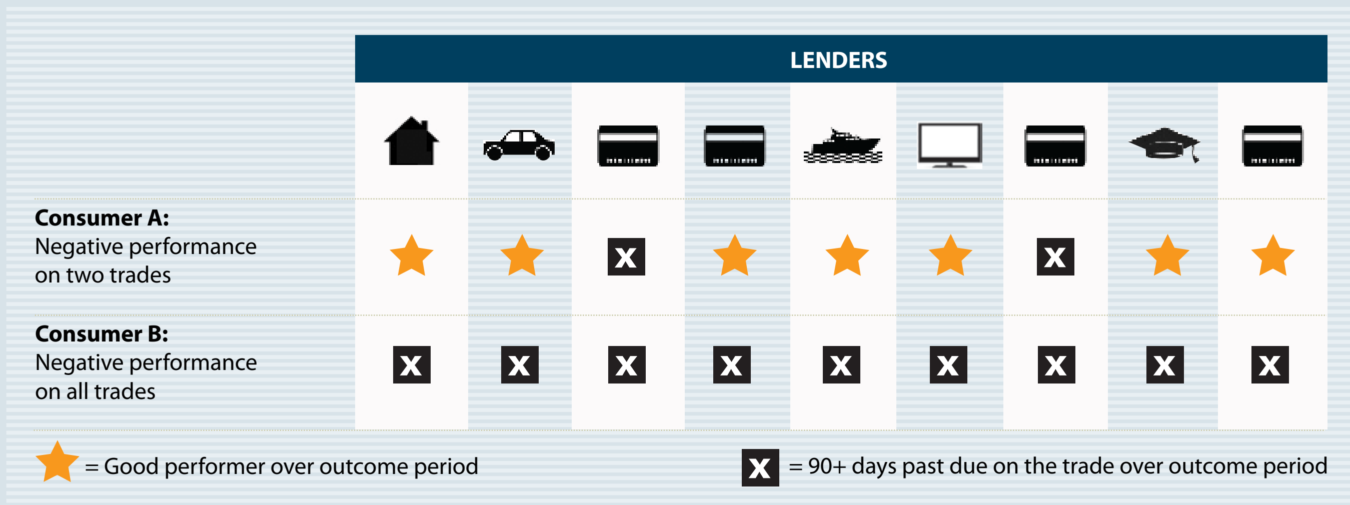
Refining performance

The new score was also built with a refined risk performance classification that more closely resembles the expected performance that a lender would observe on its customer portfolio.

The performance classification for the current FICO® Score evaluates consumers based on the worst performance on any credit obligation. By contrast, the FICO® 8 Score was developed on a performance measure that evaluates consumers based on the degree of negative performance across all credit obligations—specifically, the degree of "bad" behavior (90+ days past due) over 24 months relative to "good" behavior (see Figure 6).

Figure 6: FICO® 8 Score measures degree of "bad" behavior



The FICO® 8 Score performance classification measures consumers by degree of positive and negative performance across all credit obligations. For instance, a consumer who is delinquent on two of eight trades is categorized differently from one who is delinquent on eight of eight trades.

Continued authorized user support

In addition to performance improvements, FICO® 8 Scores continue to help lenders address Equal Credit Opportunity Act Regulation B, which requires the consideration of spousal authorized user (AU) information.[3]

More than one-third of scoreable consumer credit reports have at least one authorized user trade line, but there is currently no information in the report that identifies legitimate or spousal AU relationships. Recently, lenders have become concerned over trade line renting, or "AU piggybacking," where consumers pay to be added as authorized users on the accounts of strangers.

While substantial lender and regulator input indicated that compliance took precedence over protection from abuse, FICO analysts took up the challenge to address both. As a result, we developed patent-pending technology to consider AU data in the calculation of FICO® 8 Scores, while protecting the scores and lenders from unscrupulous credit repair.

[3] Lenders are encouraged to work with their Legal and Compliance departments to understand the required steps to evaluate spousal AU information and ensure ECOA Regulation B compliance when using any scoring system.

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This new innovation evaluates authorized user information relative to its predictive risk value. It provides a slight predictive boost, while reducing the number of points a consumer can achieve by adding illegitimate AU accounts.

Updated FICO® Industry Scores

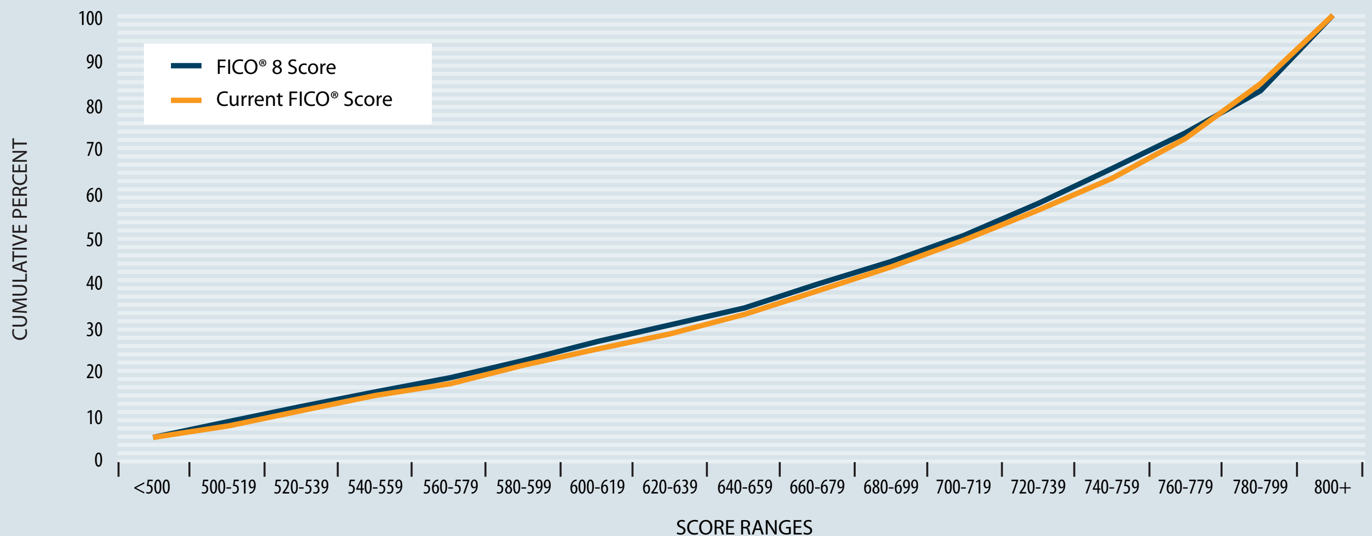
The FICO® 8 Score includes updates to the FICO® Industry Scores. It adds an industry-specific scorecard on top of the complete FICO® 8 Score, resulting in stronger risk assessment for auto and bankcard lending.

Streamlined implementation

All FICO® 8 Score improvements were made seamlessly to the FICO® Score design blueprint. In other words, FICO® 8 Scores retain:

- The same 300–850® score range
- The same score reason codes
- The same minimum scoring requirements
- The same inquiry de-duplication loan shopping treatment
- The same consistent score-to-risk alignment on the updated development data
- The same consistent odds-to-score relationship across US credit reporting agencies

As a result, lenders can improve performance without the expense and resource demands of a long implementation period. With minor shifts in score distribution, lenders may not need to significantly revise current strategies, as demonstrated in Figure 7, ensuring an easy transition to the new score.



With minor shifts in score distribution, lenders may not need to significantly revise current strategies, ensuring an easy transition to the new score.

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» Moving to the FICO® 8 Score

FICO is dedicated to ensuring a smooth, successful transition to the FICO® 8 Score.

We provide a release package with each of the credit reporting agency releases. Our consultants can work with you to evaluate the FICO® 8 Score relative to production scores, and demonstrate model performance and operational impacts when considering strategy cutoffs and corresponding population shifts. We tailor staff education to your needs and offer periodic webinars on what to expect from the new score.

To help you free up tight resources, we also conduct validations, evaluate credit criteria across the lifecycle and provide guidance on reporting.

FICO will continue to work with clients to validate FICO® Scores and underlying risk trends. New developments will be published in our Insights white paper series. Subscribe to the Insights papers at *www.fico.com/insights.*

For more information on the FICO® 8 Score, please contact FICO at 800-777-2066 or *cbhelpline@fico.com*.

The Insights white paper series provides briefings on research findings and product development directions from FICO. To subscribe, go to *www.fico.com/insights.*

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