FICO Decisions

WHITE PAPER

FICO Research

Scoring Your Customers — How Often Is Often Enough?

FICO's analysis indicates:

A notable percentage of scores migrated up or down more than 20 points over just one month.

Scores in the lower range are more likely to fluctuate. Higher scores tend to remain more stable over time.

The most current score for a given account is the most predictive.

Background: Lenders are asking: How often should I refresh the FICO® Scores of my existing customers? How many of my customers will have a material change in their score in the short term? How much will their scores change, and over what period of time?

If lenders aren't getting updated account management scores frequently enough, they run the risk of making decisions with stale information on a notable portion of their accounts. FICO® Scores provide a holistic view of the consumer's credit behaviors — tipping lenders off to deterioration in a consumer's repayment performance that may not have yet shown up in the lender's master file data.

FICO examined the movement of FICO® Scores over time to determine how often lenders should refresh their existing customers' scores. This paper highlights the key findings of the study, and offers guidance for best practices.

For competitive advantage, refresh more frequently

The findings suggest that refreshing FICO® Scores of existing accounts on a quarterly basis at a minimum, and preferably monthly, would help lenders make more effective decisions on account treatment. By leveraging fresher, more accurate scores, lenders can not only identify potential problems, but also target candidates for positive treatment and upselling.

Key Findings

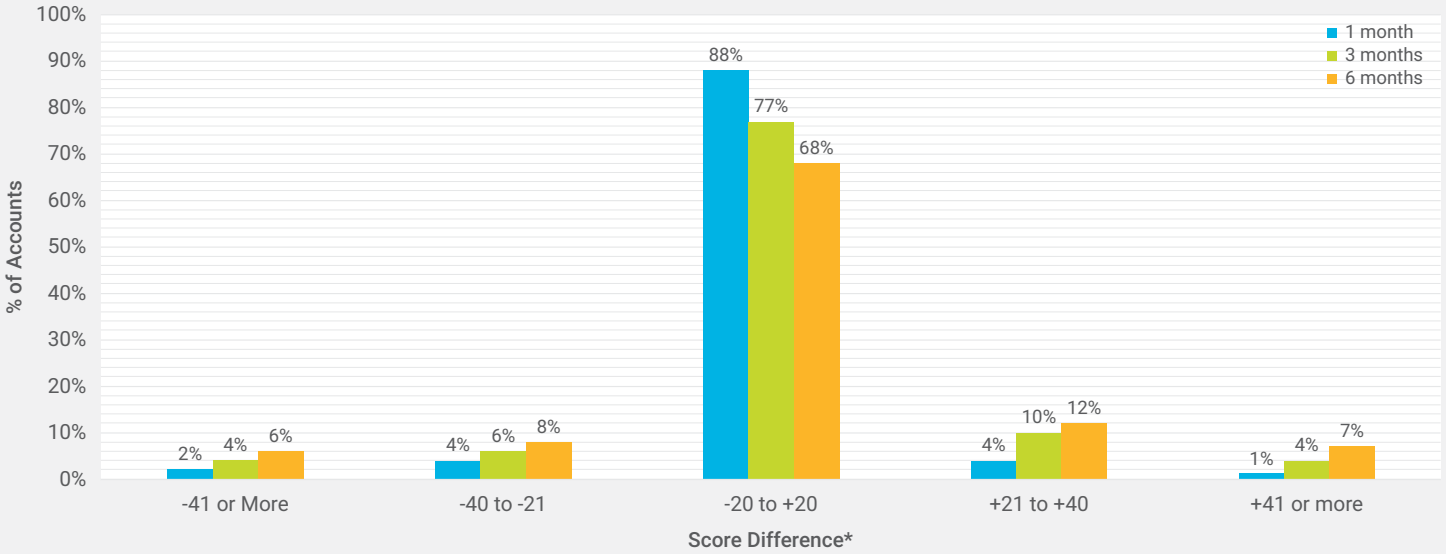
FICO looked at the extent of FICO® Score migration in a recent and nationally representative matched sample of active bankcard accounts over 1-month, 3-month, 6-month and 12-month time periods. Here's what we found:

- **A notable percentage of scores migrated up or down more than 20 points over one month, one quarter or two quarters —** from 12% in one month to 32% over six months. While the majority of individuals' scores remain relatively stable, a notable percentage of the population will have score changes that are large enough to be potentially problematic, and warrant account management attention. A large change on even a modest subset of accounts in a portfolio may have a considerable impact on portfolio risk and profitability.
- **Scores in lower ranges are more likely to fluctuate.** Higher scores tend to remain more stable over time. Recent score migration in a particular direction doesn't typically signal a trend. Lenders generally cannot forecast whether their customers' scores will rise, fall or remain stable based on recent score "trajectory."
- **The most current score for a given account is the most predictive.**

How much do scores change over time?

To assess score volatility, our study examined how scores migrated over one month, one quarter and two quarters. We looked at scores in October 2014, January 2015, and March 2015 and examined how they'd changed as of April 2015 (See Figure 1). We selected these snapshot dates to allow for a subsequent 24-month period of credit behavior post-migration (through April 2017) to be observed, enabling us to produce the swap set odds analyses shown in Figures 4 and 5 below.

Figure 1: Score Changes
1 month = March 15 to April 15, 3 months = January 15 to April 15, 6 months = October 14 to April 15



Most accounts' FICO® Scores stayed relatively stable over one and two quarters. However, 23% changed by more than 20 points in one quarter and 32% over two — significant enough to alter the balance of risk.
**Positive score difference means that FICO® Score increased over time. Note: Percentages may not sum to 100% due to rounding.*

For the majority of accounts, scores did not change more than 20 points upward or downward in the prior month or quarter. However, 12% of scores did change by more than 20 points over the preceding month, 23% changed over the prior quarter and 32% changed more than 20 points over the prior two quarters. We further found that the longer the time period since score updates or refreshes, the more likely significant migration — i.e., score changes of more than 40 points upward or downward — had occurred.

Which accounts' scores are more likely to migrate?

We examined FICO® Score 8 ranges to see whether certain subpopulations are more prone to migration than others.

In Figure 2, we see that higher scores are more likely to remain stable. For example, 75% of records with a score of 700–749 remained within 20 points of their initial score three months later. Higher scores (750+) are even more likely to remain stable, with 86% of these records staying within 20 points when re-examined three months later.

Lower scores, on the other hand, are more likely to fluctuate. In the under-550 segment, 43% of the accounts — less than half — migrated fewer than 20 points over the following quarter. For accounts with scores starting under 650 that migrated more than 20 points in the ensuing three-month period, the majority tended to migrate in a positive direction. Nevertheless, at least 10% of accounts starting below 650 moved more than 20 points downward in the following quarter.

Higher-scoring accounts will likely include the majority of a lender's best customers. Receiving frequent score updates and knowing which high-scoring accounts remain stable will guide lenders in taking appropriate action to retain their best customers. Conversely, lenders will want to know when their high-scoring accounts have seen a notable drop in score, even if those falling are only a small percentage of total accounts.

Figure 2: Three-Month Migration by Score

FICO® Score at January 2015	FICO® Score Migration Jan 2015 to Apr 2015					
	-41 or more	-40 to -21	-20 to +20	+21 to +40	+41 or more	All Migrations
<550	5%	6%	43%	20%	26%	100%
550–599	7%	7%	54%	20%	12%	100%
600–649	6%	6%	65%	16%	7%	100%
650–699	5%	6%	71%	12%	6%	100%
700–749	4%	6%	75%	11%	5%	100%
750+	2%	5%	86%	6%	1%	100%

Higher scores remain more stable. Lower scores exhibit more fluctuation, with most of those lower scores that change by more than 20 points moving upward.
Note: Percentages may not sum to 100% due to rounding.

Does score migration signal a trend?

Does the movement of a score up or down make continued movement in that same direction more likely? While many lenders might intuitively think so, this is often not the case.

Figure 3 compares score migration in one three-month period (left column) with that over the following three-month period (top row). Of the borrowers whose scores dropped by more than 40 points in the first quarter, only 5% dropped at the same rate in the second quarter. However, 47% roughly stabilized (remaining within 20 points) in the subsequent quarter and a considerable percentage, 21%, bounced back with a more than 40-point increase the following quarter. (Note that the tendency of large score "droppers" to "bounce back" is exhibited more by borrowers starting in high score ranges than those who start in low score ranges; on average, high-scoring accounts are more stable over time.)

Therefore, score migration doesn't typically signal a trend. Lenders cannot forecast whether their customers' scores will rise, fall or remain stable based on recent score "trajectory." This is why it is critical that a lender receive refreshed scores frequently. (See "How often should updated scores be obtained?" below for a discussion of optimal frequency of score refreshes.)

Figure 3: Score Migrations in Two Consecutive Quarters

FICO® Score Migration Oct 2014 to Jan 2015	FICO® Score Migration Jan 2015 to Apr 2015					
	-41 or more	-40 to -21	-20 to +20	+21 to +40	+41 or more	Total
-41 or More	5%	5%	47%	21%	21%	100%
-40 to -21	4%	5%	59%	23%	9%	100%
-20 to +20	3%	5%	81%	8%	3%	100%
+21 to +40	6%	11%	71%	9%	3%	100%
+41 or More	11%	12%	64%	9%	3%	100%
All Migrations	4%	6%	77%	10%	4%	100%

Score migration in one quarter does not suggest that the migration will continue in the same direction in subsequent quarters. As indicated by the shaded area, scores that fluctuate by more than 20 points have a greater tendency to "return to their mean" (either rebounding from a drop or falling back from an increase) than they do of continuing with their recent trend. This pattern is stronger with higher-scoring accounts than it is with lower-scoring ones.
Note: Percentages may not sum to 100% due to rounding.

How much more predictive is a fresher score?

Using 24-month good/bad odds statistics, we conducted a score cutoff sensitivity analysis to see to what extent a current score outperforms an older one as a predictor of risk. The results in Figure 4 illustrate the value of the fresher score.

The first column in the chart shows sample score cutoffs. The next two columns show the percentage of accounts falling above and below each cutoff. For example, at a cutoff of 670, 77.2% of the accounts would pass and 22.8% would not.

The next two columns show the percentages of accounts that migrated above or below the cutoff three months after the initial observation date. At the same 670 cutoff, 2.5% of the accounts migrated from below to above the cutoff, and 1.7 % migrated from above to below. (In order to focus on more substantial shifts in scores and odds, we restricted the analysis to accounts that moved 10 points or more.) These "swap sets" capture the accounts potentially receiving different treatment at an April 2015 decision date, depending upon whether the older or the current score was used to make the decision.

The last two columns illustrate the odds of the "swap-in" (migrated above) and "swap-out" (migrated below) groups. At a cutoff of 670, the odds of those whose scores migrated above the cutoff was 15.5 to 1, versus 5.7 to 1 for those records that dropped below 670.

The fact that the "migrated below" records have much worse odds than the "migrated above" records means that the change in score over the three-month interval reflected a real change in the risk level of the consumers involved. The group that migrated above cutoff did indeed perform better over the subsequent 24-month period than those whose scores fell below cutoff.

This demonstrates that the most current score is more predictive than the older score, enabling lenders to make more informed decisions.

Figure 4: Migration Around Cutoff Scores

Jan 2015	April 2015					
	Beginning of Migration		End of Migration		Swap Set Odds	
Cutoff Score	% Above Cutoff	% Below Cutoff	Migrated Above	Migrated Below	Migrated Above (swap-in)	Migrated Below (swap-out)
580	94.6%	5.4%	1.5%	1.2%	3.3	1.1
620	88.8%	11.2%	2.1%	1.5%	6.2	2.2
670	77.2%	22.8%	2.5%	1.7%	15.5	5.7
700	68.6%	31.4%	2.7%	1.8%	28.4	10.6

Accounts that migrate above the cutoff score over a three-month period are more likely to perform well over the subsequent 24 months than those that drop below the cutoff. The fresher score is more predictive than the older score. (Note: In order to focus on more substantial shifts in scores and odds, we restricted the analysis to accounts that moved 10 points or more.)
Note: Percentages may not sum to 100% due to rounding.

Furthermore, as shown below, the more time that elapses between score updates, the greater the discrepancy between the "migrated above" and "migrated below" odds.

Figure 5 compares odds for two cutoff examples of 620 and 670, where the time between score updates is examined from one to 12 months. The older scores yield larger swap sets — for example, at the 670 cutoff, 3.3% migrated above cutoff after six months compared to 2.5% after three months. Longer time gaps also produce greater differences between the observed risk of the swap sets. For example, at the 670 cutoff, after 12 months the odds for the "migrated above" set are 19.8 to 1 versus 4.5 to 1 for the "migrated below" segment — compared with 15.5 to 1 versus 5.7 to 1 for the three-month interval.

The older scores clearly provide a less accurate assessment of risk. Lenders using older scores are at greater risk of making suboptimal decisions on consumers whose scores have changed over time.

Figure 5: Migration Around Scores Cutoffs Over Longer Periods

		Start of Migration		End of Migration		Swap Set Odds	
		% Above Cutoff	% Below Cutoff	Migrated Above	Migrated Below	Migrated Above (swap-in)	Migrated Below (swap-out)
620 Cutoff	1 month	89.2%	10.8%	0.9%	1.0%	5.6	2.6
	3 month	88.8%	11.2%	2.1%	1.5%	6.2	2.2
	6 month	88.9%	11.1%	2.7%	2.1%	7.1	2.0
	12 month	88.7%	11.3%	3.7%	2.8%	8.0	1.9
670 Cutoff	1 month	77.8%	22.2%	1.1%	1.1%	14.2	6.9
	3 month	77.2%	22.8%	2.5%	1.7%	15.5	5.7
	6 month	77.4%	22.6%	3.3%	2.5%	17.0	5.0
	12 month	77.2%	22.8%	4.6%	3.4%	19.8	4.5

The more time between score updates, the greater the discrepancy between the "migrated above" and "migrated below" odds. When the scores are 6–12 months old, the swap-in (migrated above) odds are between three and four times the swap-out (migrated below) odds.
Note: Percentages may not sum to 100% due to rounding.

How often should updated scores be obtained?

As we have seen, scores may move substantially over a one-month period (See Figure 1). Swap sets with notable discrepancies between the "migrated above" and "migrated below" odds appear over a one-month window (See Figure 5).

For existing account management, FICO considers the best practice to be monthly score refreshes. Lenders also benefit from trigger mechanisms for pulling fresh scores on particular accounts in certain situations: "push" triggers, instructing credit bureaus to supply a fresh score when something significant such as a new delinquency changes on a consumer's credit file; and "pull" triggers that prompt the lender to obtain a fresh score, for example, when the customer is seeking a credit line increase.

In the securitization market, institutions assessing the risk of consumer credit debt are strongly encouraged to obtain fresh scores on the accounts in question — rather than relying on outdated originations scores. As we have seen, older scores provide a less accurate estimate of future repayment rates. Institutions using outdated scores to evaluate portfolio risk are at greater risk of making suboptimal decisions.

Conclusion

In today's credit environment, there is a smaller margin for error. Proactive lenders want to be sure they are not caught unaware of borrowing activity that may turn yesterday's "good" customer into a future write-off. Thus, the industry's largest lenders are making decisions based on current credit scores. The latest research on score migration, combined with experience from leading lenders, affirms that frequent FICO® Score refreshes will help institutions cost-effectively make better decisions in managing portfolio risk.

FICO is continually analyzing trends and practices in the credit market to help lenders apply FICO® Scores most effectively in their decision processes. To learn more, contact us at FICOScoreinfo@fico.com.

FICO

FOR MORE INFORMATION
www.fico.com
www.fico.com/blogs

NORTH AMERICA
+1 888 342 6336
info@fico.com

LATIN AMERICA & CARIBBEAN
+55 11 5189 8267
LAC_info@fico.com

EUROPE, MIDDLE EAST & AFRICA
+44 (0) 207 940 8718
emeainfo@fico.com

ASIA PACIFIC
+65 6422 7700
infoasia@fico.com

4485WP_EN 12/17 PDF