

## How Are Credit Line Decreases Impacting Consumer Credit Risk?

As lenders reduce or close credit lines to mitigate exposure, new research explores its impact on FICO scores

Number 22 — August 2009

With recent news headlines like “Lenders slash credit for responsible borrowers,” there is no doubt that the issue of credit line decreases has become top-of-mind—and not just for lenders. News media, the government and consumer advocates have all taken notice.

*FICO analyzed recent bureau data to better understand how recent credit line decreases and account closures are affecting FICO® scores, and whether this data continues to be predictive. This paper highlights key research results.*

Certainly, the lender practice of reducing credit lines and closing accounts is not new. For decades, lenders have employed this risk mitigation strategy when customers have missed payments or otherwise shown high-risk behavior.

But in the wake of unprecedented delinquencies, recent reports suggest that lenders are more actively decreasing available credit for more customers, including those in good standing. There is concern that this could be causing large decreases in FICO® scores.

To better understand this impact, FICO conducted research to determine how recent credit line decreases and account closures are affecting FICO® scores, and whether this data continues to be predictive. Key findings include:

- **Credit indebtedness information continues to be very predictive.** Higher revolving credit utilization continues to correlate with higher future risk. Consumers who utilize 70% or more of their available credit have a future bad rate 20 to 50+ times greater than consumers with lower utilization. In addition, suppressing this data from the score would not only decrease its predictive power, but would significantly decrease many consumers’ FICO® scores, particularly for low-risk consumers.
- **More consumers are having their available credit reduced.** Roughly one in five US consumers had a reduction in revolving credit, up slightly from 15% in the previous timeframe. The average decrease was \$5,100 (15% of average total revolving credit)—more than double the \$2,200 in the previous timeframe (5% of average total).
- **The impact of line decreases on FICO® scores is minor for most consumers.** FICO analyzed actual score changes for “no risk trigger” consumers experiencing credit reductions, and ran simulations to test the impact of moderate to extreme credit line reduction scenarios. In both studies, score decreases were negligible, on average, for the majority of consumers.

This paper explores these findings in greater detail.

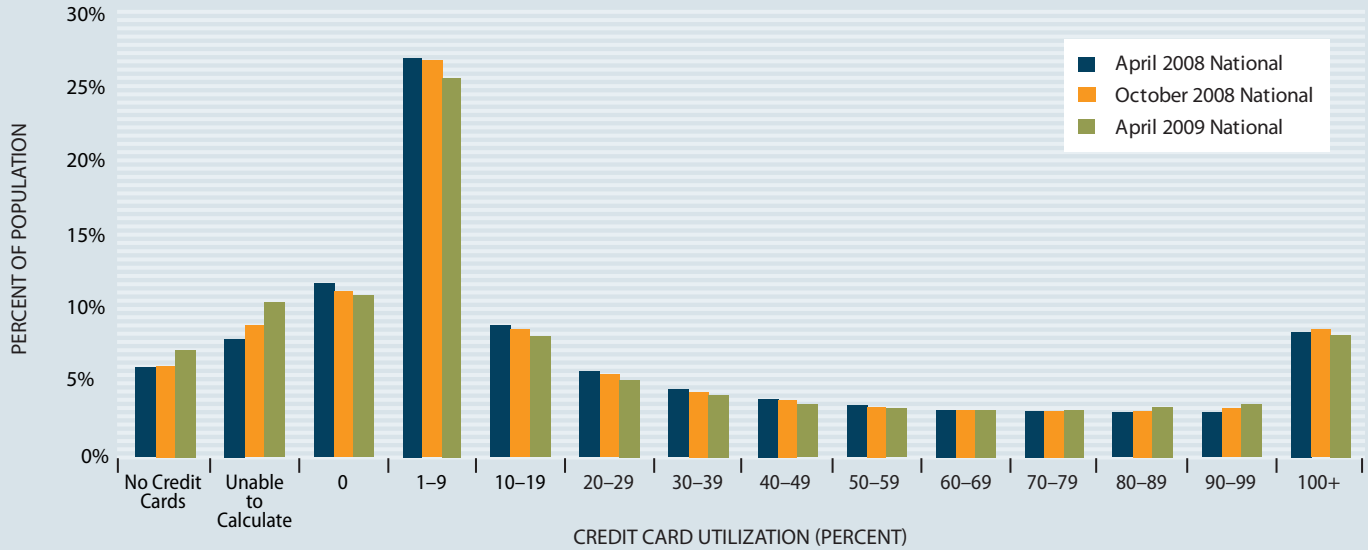
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» **Is credit utilization data still predictive?**

FICO research shows that the amount of available credit utilized remains highly predictive of the likelihood of future credit delinquency. Figures 1 and 2 show the distribution and predictive value of the “credit card utilization” variable over recent time periods.

**Figure 1: Credit card utilization in recent time periods**

Predictive Variable Distribution



Source: FICO® Score Trends Service

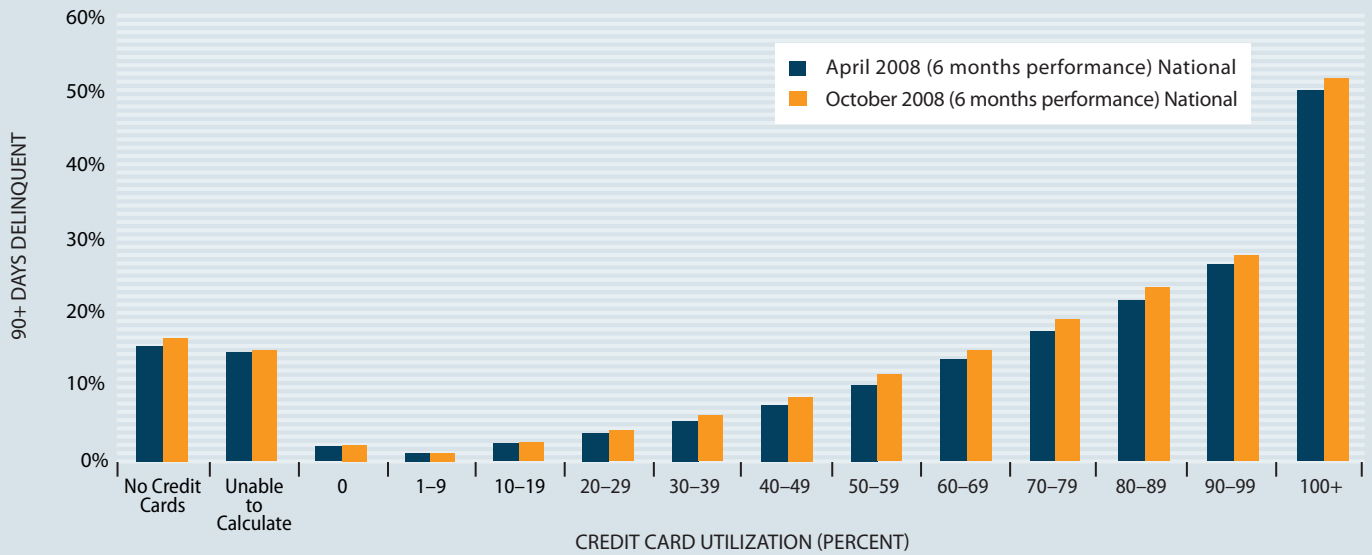
Figure 1 illustrates the distribution of the US population at three points in time by credit card utilization. More than 35% of consumers are using a low proportion—9% or less—of their available revolving credit. The distribution patterns have remained relatively stable over the three time periods observed. (Note: “Unable to calculate” refers to consumers where no utilization can be calculated—e.g., all their credit cards are closed.)

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Figure 2 shows the delinquency rates on these populations over a six-month period. The data clearly shows that consumers with higher credit card utilization are much riskier, as reflected by higher bad rates (90 days or more delinquent on credit obligations within six months after score date).

**Figure 2: Higher utilization correlates to higher bad rates**

Variable Risk Pattern



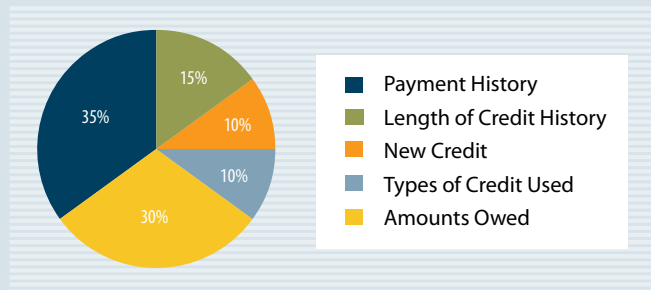
Source: FICO® Score Trends Service

**How do FICO scores factor in “available credit”?**

FICO scores are calculated from five categories of credit data in a consumer’s credit report. The chart to the right illustrates the importance of each category for the general population. These percentages may vary for particular groups—for instance, people who have not been using credit long.

Credit limit information is considered in the Amounts Owed category. Unlike some other bureau risk scores, FICO® scores do not consider a consumer’s available credit as a standalone characteristic for which a consumer would lose points if a lender were to reduce or close his/her account.

Instead, FICO® scores consider the consumer’s available credit in relation to outstanding balances when assessing credit indebtedness—that is, how much available credit is being used at the time of scoring. Suppose a consumer has a credit card with a \$20,000 limit and a \$10,000 balance; the revolving utilization rate would be 50% (\$10,000/\$20,000).



There are numerous characteristics related to utilization, which are extremely predictive and heavily leveraged in the score. In general, the higher the percentage of credit utilized, the greater the consumer risk.

FICO® scores are calculated using the latest reported credit bureau data at the time the consumer’s score is requested. The bureau data only shows the revolving credit (line and balance) most recently reported by the lender. There is no information on the credit report indicating previous credit limits or how much a limit may have changed.

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» **How would scores be affected if utilization was not factored in?**

To answer this question, FICO suppressed utilization calculations and regenerated FICO® scores on a recent, nationally representative sample. The distribution and predictive power of the resulting score was then analyzed, including for consumers with and without derogatory information on file.

**Figure 3: Without utilization characteristics, more consumers score lower**  
 Score Difference Distribution (Simulated Less Original Score) FICO® Score, Total Population

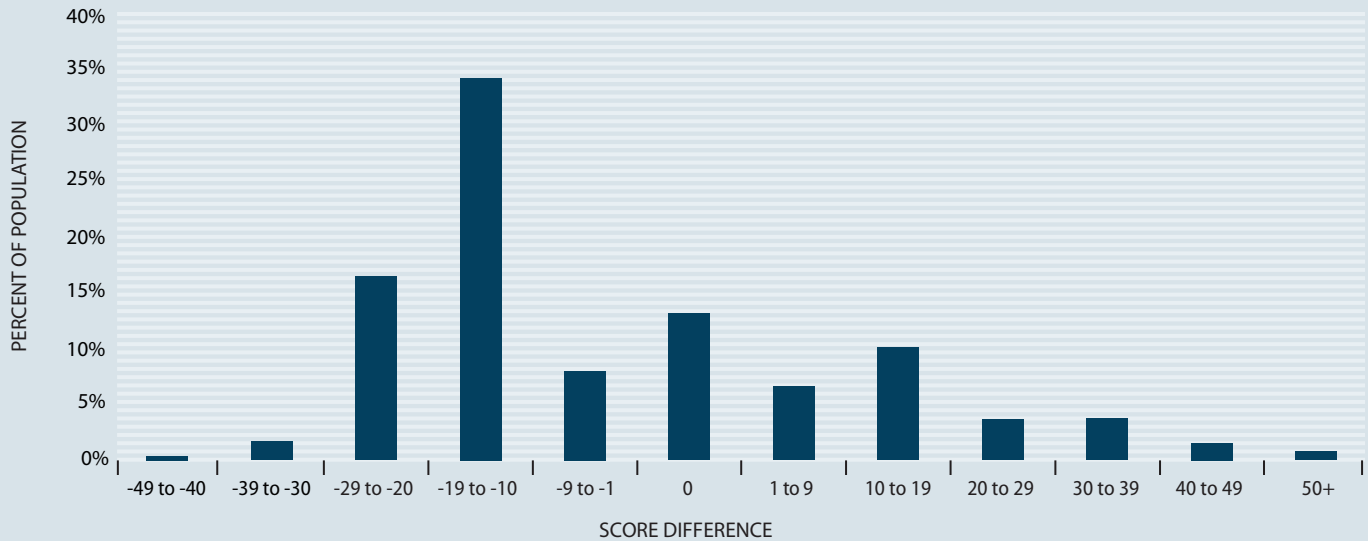


Figure 3 illustrates how consumers' scores changed. Overall, more consumers are scoring lower. This is not surprising, since the overall population trends toward lower utilization, and thus, removing data on this lower-risk behavior would lower scores.

However, scores increased for a segment of consumers who are generally higher-risk, with higher utilization. These consumers are no longer being penalized for this riskier credit behavior.

In addition, fewer consumers are scoring in the lowest and highest score ranges, with the most notable impact on consumers in the highest score ranges. High-scoring consumers were likely benefiting from relatively low utilization values in their actual scores, and score lower when this low-risk behavior is not factored in.

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**Figure 4: FICO® score is less predictive without utilization calculations**  
 Trade-off Curve Comparison: FICO® Score on Non-Derogatory Population Segment  
 All Industries—Existing Accounts

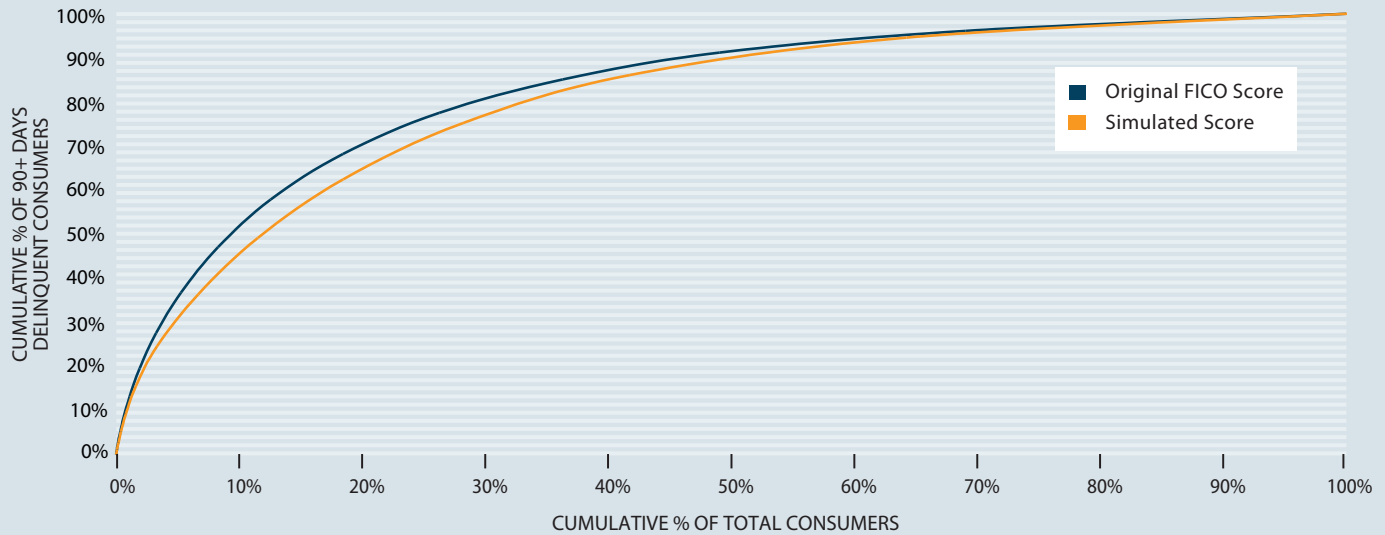


Figure 4 compares the ability of the scores to identify future “bads” (non-payers) for all existing accounts over a 12-month period (May 08–April 09). There is substantial degradation in the predictive power of the simulated score (orange line) compared to the original FICO® score. The higher the line, the more effective the model is at identifying non-payers.

This demonstrates the importance of utilization calculations in the predictive power of the score. For example, at an 80% approval rate (at a cutoff of the lowest-scoring 20%), there would be 16% more bads accepted using the simulated score instead of the original FICO® score.

» **How do credit line decreases or account closures affect FICO® scores?**

Holding all other conditions constant, we would expect that a reduction in available credit or the closure of a revolving account would either have no impact on the customer’s score or may cause it to decrease.

In reality, credit conditions do not stay constant. Our research shows that an individual consumer’s score may go down, go up or stay the same after the line decrease or account closure. This can be due to one or more of the following factors that also impact score movement:

- The consumer’s overall credit profile—in other words, what else has occurred in their credit history, as reported to the credit reporting agencies.
- The amount of reduction in revolving credit.
- How the consumer reacts to the lender’s action. Does the consumer make or miss payments? Grow or pay down balances? Open new credit accounts?

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To more fully understand potential impacts on FICO® scores from lenders reducing credit limits or closing accounts, FICO employed two distinct research approaches:

1. We calculated the impact on scores of a *simulated* reduction in aggregate revolving credit limits, holding constant all other conditions on the credit reports.
2. We measured the *observed* change in scores for consumers that had a reduction in available revolving credit but no “risk triggers” that could have driven the lender action.

Both research projects were conducted on large, nationally representative samples of anonymous credit reports.

**Study #1: How would a credit line decrease or account closure affect the FICO® score, holding other conditions constant?**

FICO conducted a simulation analysis to explore what would happen to FICO scores after a credit line decrease, holding all other credit information fixed. We systematically reduced the credit lines for all credit cards in the consumer’s report by a series of progressively larger percents. We then re-generated FICO® scores and measured the score impact for each of three scenarios.

For all three scenarios, the majority of the population’s score was not affected—even when the most severe scenario was applied.

- **Moderate Scenario:** decreased lines up to 10%; 84% of consumers experienced no change in score
- **Medium Scenario:** decreased lines up to 25%; 68% experienced no change
- **Severe Scenario:** decreased lines up to 50%; 56% experienced no change

The results also show that a larger percent of the population experience a decrease in score as the simulated line decrease increases. We focused on that population segment to understand the magnitude of the average score decrease for the three scenarios. For this segment, the average score was 719 prior to the simulated line reduction. About 54% of the segment had relatively low revolving utilization (1%–19%).

Figure 5 shows that in all three scenarios, the average FICO® score for these comparatively good customers dropped when the credit line was reduced. The larger the simulated decrease in credit, the greater the decrease of the average FICO score.

Figure 5: Average score decreases for simulated line reductions

Decrease in Credit Limit	Average \$ decrease in Credit Limit	Average FICO® Score	Average Decrease in FICO Score
up to 10% (moderate)	\$3,900	718	1 point
up to 25% (medium)	\$9,800	715	4 points
up to 50% (severe)	\$19,600	710	9 points

However, even in the unlikely severe scenario, the average decrease in score was not as great as many would anticipate. In fact, in the severe scenario, only about 13% of the population would experience a FICO® score decline of 20 points or more.

In general, the analysis showed that consumers with limited credit history, “thinner” credit files and moderate levels of utilization were more likely to experience a larger drop in score resulting from credit line decreases.

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FICO also evaluated whether the amount of score impact would differ depending on FICO® score range. Figure 6 shows the average change in score by score range for the moderate, medium and severe scenarios.

Figure 6: Average score decrease by FICO® score range

Pre-Simulation FICO Score Range	Pre-Simulation Average FICO Score	Moderate (up to 10% Decrease in Credit Limit)		Medium (up to 25% Decrease in Credit Limit)		Severe (up to 50% Decrease in Credit Limit)	
		Average FICO Score*	Average Decrease in Score**	Average FICO Score*	Average Decrease in Score**	Average FICO Score*	Average Decrease in Score**
< 580	530	528	2	525	4	523	7
580–619	601	599	2	596	5	592	9
620–639	630	628	2	624	6	620	10
640–659	650	647	2	644	6	639	11
660–679	670	667	2	664	6	658	12
680–699	690	688	2	684	6	678	12
700–739	719	717	2	714	5	707	12
740–779	761	759	1	756	5	749	11
780+	802	801	0	800	1	797	4

\* Represents average FICO score in each score band post credit line decrease simulation.

\*\* Represents the average decrease in FICO score by score band after running simulations. Due to rounding, the average score pre-simulation minus the average decrease in score will not always equal the average score post simulation.

The more severe the simulated decrease in credit limit, the greater the average decrease in FICO® score across all score ranges. The average decrease is less in the high and low ends of the range compared to the middle.

In the lower score ranges, it is likely that many consumers are already demonstrating higher credit card utilization patterns that are being reflected in their scores. Thus, their scores are not changing significantly.

High-scoring consumers tend to have low credit card utilization. Accordingly, even a sizable decrease in available credit has less likelihood of substantially changing the consumer's utilization percentage. Even with a doubling of a very low utilization value (from 5% to 10%, for example), the consumer still has relatively low utilization and would therefore see little impact on score.

Since consumers in the mid score ranges are more likely to have higher utilization patterns, it is not surprising that they are more affected by the more severe credit line reductions. If a consumer's utilization doubles from 45% to 90%, he/she would be viewed as close to "maxed out" and would likely see a more substantial reduction in score.

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**Study #2: How have recent credit line decreases or account closures affected FICO® scores?**

The simulated approach allows us to isolate and more fully understand the potential impact on score from the change in available credit. But it does not reflect what else is happening in the credit file. It is likely that other factors are changing at the same time, which can also affect the FICO® score.

Thus, in addition to the simulated research, FICO also measured actual score changes between two six-month periods (April 2008–October 2008 and October 2008–April 2009). We focused on consumers who had a reduction in available revolving credit or a line closed by a credit grantor.

The percentage of consumers experiencing a reduction in available revolving credit has increased from approximately 15% to 20% in the most recent time period. The overall profile of the impacted groups remained similar over both time periods:

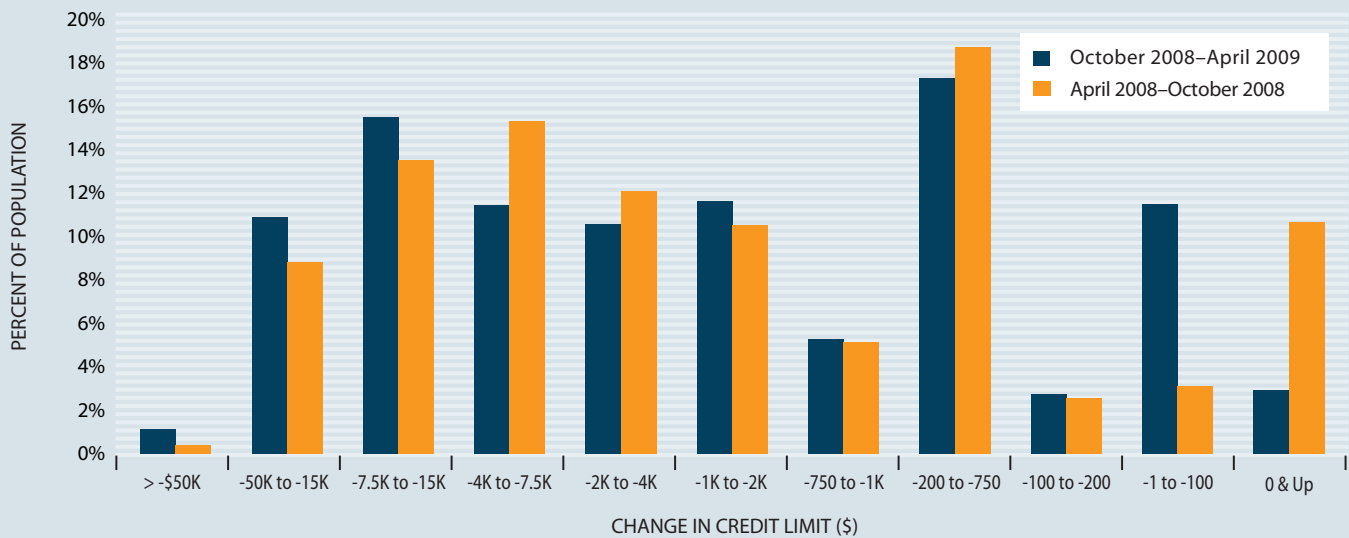
- **14.5% had no obvious new “risk triggers”** in their credit reports—such as late payment notices—that would have potentially driven lender action. It’s important to note that in addition to bureau data, lenders leverage other information to determine future risk and target consumers for credit reductions or other actions.
- **5.3% did have obvious new negative activity** reported.

At the macro level, there is limited impact on the FICO® score resulting from this line decrease or account closure activity. The median score on the total impacted population remained relatively stable, migrating from 714 in October 2008 to 711 in April 2009. For the “no risk triggers” segment, the median FICO score of 760 remained basically unchanged after the reduction in credit.

**Figure 7: Line reductions are increasing for consumers with no risk triggers**

Revolving/Open Population—Credit Limit Decreased and/or Closed by Credit Grantor

No Risk Trigger Between Snapshots



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Why aren't scores changing more? It appears that lenders are continuing to target inactive and low-balance cardholders for line decreases or account closures. On average, the "no risk triggers" population tends to be very low risk to begin with—median FICO® scores of 760, very low balances and low utilization ratios, very few if any missed payments, and long credit histories. Thus, the effect of credit reduction on the FICO score is minimal.

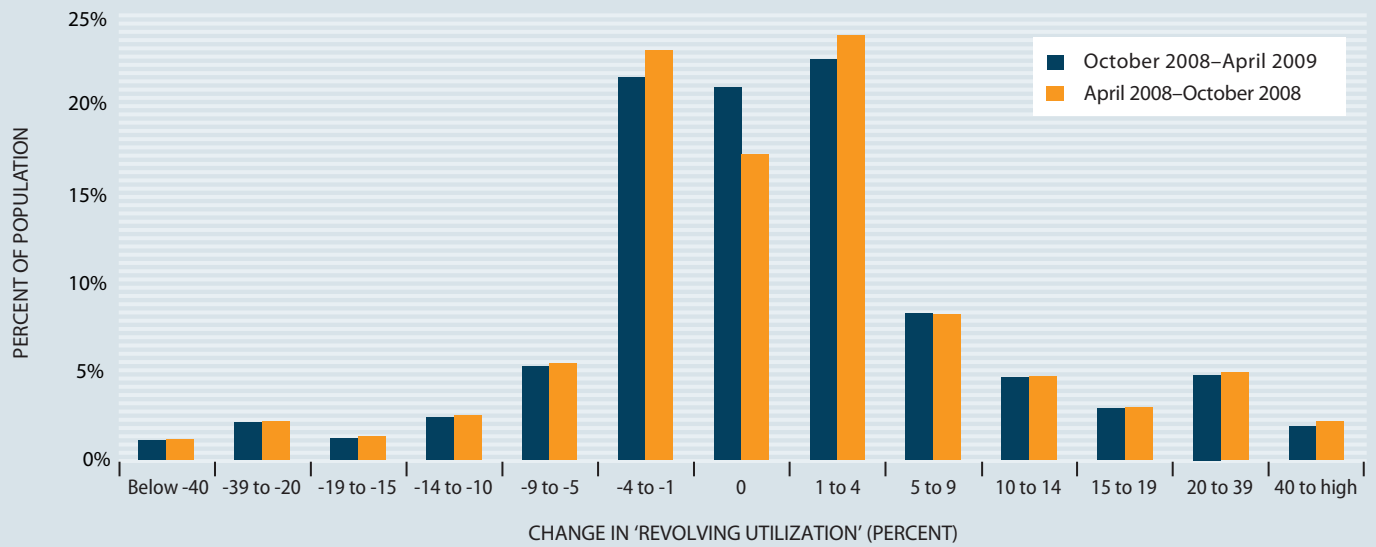
Figure 7 shows the amount of reductions in revolving credit for the "no risk triggers" segment.

The average amount of decrease in the more recent time frame was \$5,100, more than double the average of \$2,200 in the previous six-month period. The \$5100 average decrease represents about 14% of the average total revolving credit for this segment, compared to 5% of total in the previous period.

Line closure actions contributed more substantially to the larger average amount of decrease compared to credit card line decrease activity.

Figure 8 shows that revolving utilization patterns remain consistent for consumers in the "no risk triggers" segment during both time periods.

**Figure 8: Minor changes in utilization for "no risk trigger" consumers**  
 Revolving/Open Population—Credit Limit Decreased and/or Closed by Credit Grantor  
 No Risk Trigger Between Snapshots



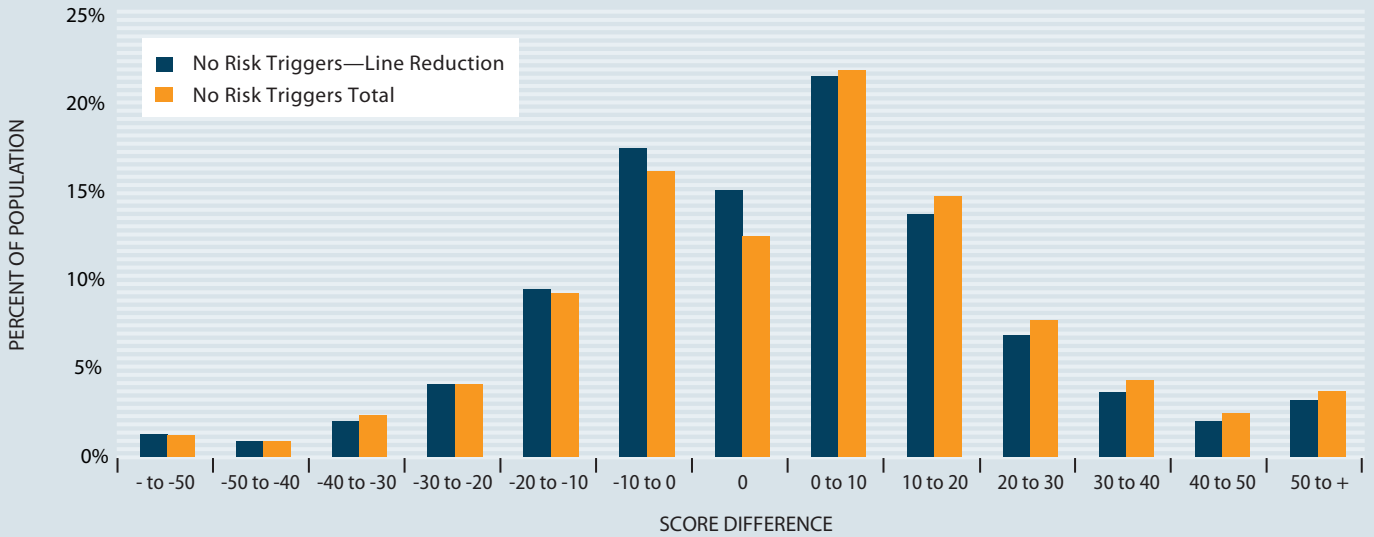
Average utilization was roughly 22% in the more recent time period, similar to the previous time window. The average change at the end of the six-month period was +2% (from 22% in October 2008 to 24% as of April 2009)—again similar to the previous period. For more than 62% of consumers, the change in overall revolving utilization at the end of the six-month period was within +/- 4% points in both time periods.

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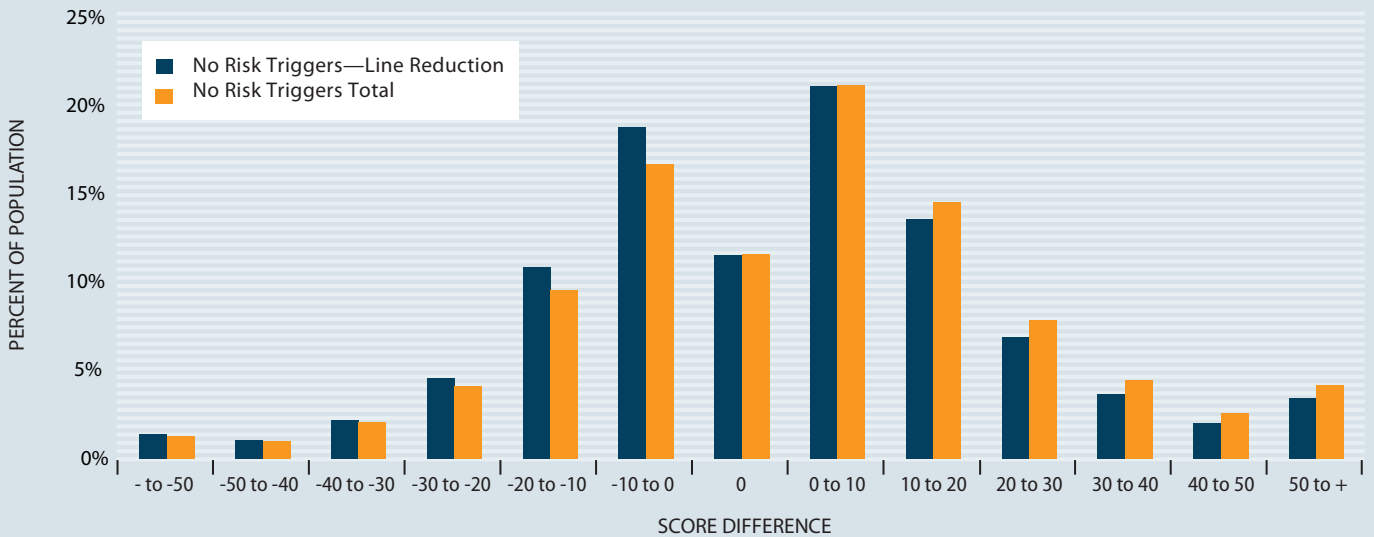
» **What's the impact of line decreases on FICO® score distribution?**

Figures 9 and 10 measure score distribution trends for “no risk triggers”—line reduction consumers compared to the total “no risk triggers” population. Figure 9 illustrates the distribution on the most recent time frame, and Figure 10 represents the previous time period.

**Figure 9: Score distributions for recent time period**  
 Score Difference Comparison (April 2009 FICO® Score–October 2008 FICO Score)  
 No Risk Trigger Between Snapshots



**Figure 10: Score distributions for previous time period**  
 Score Difference Comparison (October 2008 FICO® Score–April 2008 FICO Score)  
 No Risk Trigger Between Snapshots



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Overall, there are similar score movement trends occurring for both the “no risk triggers”—line reduction and the total “no risk triggers” segments. We see that:

- Scores are moving up, down or remaining constant.
- The majority of score changes are within +/- 20 points during the six months.
- Relatively few consumers are experiencing large score drops (40+ points).
- The “no risk triggers”—line reduction segment shows slightly greater score decreases—in other words, the distribution shows slightly greater negative shifts—compared to the total “no risk triggers” population.
- For the “no risk triggers”—line reduction segment, the median FICO® score remained relatively the same at 760 in both time periods.

These results show that for an overwhelming majority of “no risk triggers”—line reduction consumers, FICO® score movement is relatively small, and therefore, would have limited to no impact on credit granting decisions, such as determining loan rates and terms.

Figure 11 shows the percent of “no risk triggers”—line reduction consumers that migrated between FICO® score tiers between October 2008 and April 2009. The score tiers correspond to national average interest rate tables by FICO score interval for real estate and auto lending loans, as compiled by Informa Research Services.

Figure 11: Score migration for “no risk trigger” consumers who received line reductions

FICO® Score (October 08)	FICO® Score (April 09)							Total
	300–619	620–639	640–659	660–679	680–699	700–759	760–850	
300–619	4.56%	1.49%	0.78%	0.26%	0.08%	0.05%	0.00%	7.21%
620–639	0.42%	1.03%	1.21%	0.56%	0.16%	0.08%	0.00%	3.46%
640–659	0.18%	0.49%	1.64%	1.54%	0.54%	0.23%	0.02%	4.64%
660–679	0.07%	0.21%	0.74%	2.26%	1.72%	0.72%	0.06%	5.77%
680–699	0.03%	0.07%	0.26%	0.91%	2.95%	2.37%	0.15%	6.73%
700–759	0.02%	0.06%	0.15%	0.41%	1.41%	15.15%	3.43%	20.62%
760–850	0.00%	0.00%	0.02%	0.09%	0.13%	2.53%	48.79%	51.56%
Total	5.28%	3.35%	4.79%	6.02%	6.98%	21.13%	52.45%	100%

■ Consumers move up one score band    
 ■ Consumers stay within the same score band    
 ■ Consumers move down one score band

Despite experiencing a reduction in total revolving credit during the period, the overwhelming majority of consumers (76%) stay within the same score band. Those who shift to a neighboring score band are more likely to move upward (12%) than downward (7%). Thus, most consumers would qualify for the same or better interest rates, based on FICO® score alone.

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» Among “no risk triggers” consumers, does the FICO score still accurately reflect risk?

With more consumers affected by line decreases and account closures, FICO conducted further research on the “no risk trigger” consumer segment to answer: Given the change in their credit utilization stemmed from a lender decision, rather than the consumer’s own action, does the FICO® score still accurately reflect their risk level?

To address this, we identified all consumers who experienced a reduction in available credit between April 2008–October 2008 and had no risk triggers during this time. We then divided this population into two groups:

- **Involuntary No Risk Triggers:** Experienced reduced available credit due at least in part from lender line decreases.
- **Voluntary No Risk Triggers:** Experienced reduced available credit due to their own actions—for example, increasing balances or voluntarily closing accounts.

We then calculated 90+ delinquency rates for each segment over the subsequent six months (October 2008–April 2009). Figure 12 compares bad rates by score.

FICO® scores are designed to rank-order consumer credit risk, and our analysis shows that it does so for both segments. In other words, the higher the score, the lower the risk or bad rate.

Comparing the two segments, both have similar bad rates at a given score. This reinforces that the score is accurately assessing risk for both segments. That is, for both segments, consumers at a given score are not paying as agreed at approximately the same rate.

In fact, bad rates for the involuntary reduction segment are slightly higher than the voluntary group. If the score stemming from a lender-initiated line

decrease were not accurately assessing risk, we would have seen the *opposite* result. The involuntary segment would have resulted in noticeably lower bad rates at a given score—demonstrating lower risk—compared to their voluntary counterparts.

Figure 12: Comparing bad rates for “no risk trigger” groups

FICO® Score as of October 2008	Bad rate: October 2008–April 2009	
	No Risk Triggers Involuntary Reduction	No Risk Triggers Voluntary Reduction
600	29.2%	23.3%
640	14.6%	11.6%
680	6.6%	5.3%
720	2.9%	2.4%
760	1.2%	1.0%
800	0.5%	0.4%

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» Conclusion

FICO research reinforces that information about a consumer's debt burden remains very predictive, and that more consumers are being affected by lender-initiated line decreases. However, the increased lender action has had relatively minor impact on FICO® scores.

FICO® scores continue to serve as an effective risk assessment tool for all consumers, including those affected by line decreases. As always, FICO recommends using the scores as part of lending practices that consider a broad view of risk, which may include risk factors not captured by bureau scores and data.

FICO will continue to analyze FICO® scores and underlying risk trends, and dig deeper on key scoring topics in future Insights white papers. Visit [www.fico.com/insights](http://www.fico.com/insights) for more Insights papers, including:

- FICO Score Trends in Today's Economic Uncertainty
- A Recipe for Right-Sizing Credit Facilities

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