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Is Growing Student Loan Debt Impacting Credit Risk?

New research shows that student loan debt has increased dramatically and student loans are riskier than before

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As US students incur more student loan debt, lenders and investors in student loans are asking how this is impacting credit risk and the FICO® Score. FICO conducted research to examine the changes in the credit landscape of student loans since 2005. We quantified the growth of student loan debt, documented the increasing risk of student loans and analyzed shifts in general credit risk associated with such loans.

The headline finding is that consumers opening student loans more recently are generally higher risk than those in older vintages. This coincides with the fact that student loan default rates are much greater today, in both account management and originations validations. Additionally, analysis of millions of credit profiles reveals a marked increase in student loan debt. This greater debt and the challenging labor market for recent graduates will continue to cast a dark cloud over the industry.

Key research findings:

- *Student loan debt has increased dramatically.*
- *More recent student loans are riskier than earlier vintages.*
- *Default rates for student loans have increased.*
- *FICO® Scores continue to effectively assess student loan risk.*

Our evaluation of credit risk patterns also reveals that high levels of student loan debt are now riskier than before. Despite this, the analysis confirms that the FICO® Score continues to effectively assess the credit risk of student loans.

With the impact of the mortgage meltdown so fresh, it is imperative that the risk associated with student loan debt continue to be monitored. As recent vintages of student loans mature, the combination of lower credit quality at originations, higher debt loads and a challenging labor market represent a problematic confluence of conditions.

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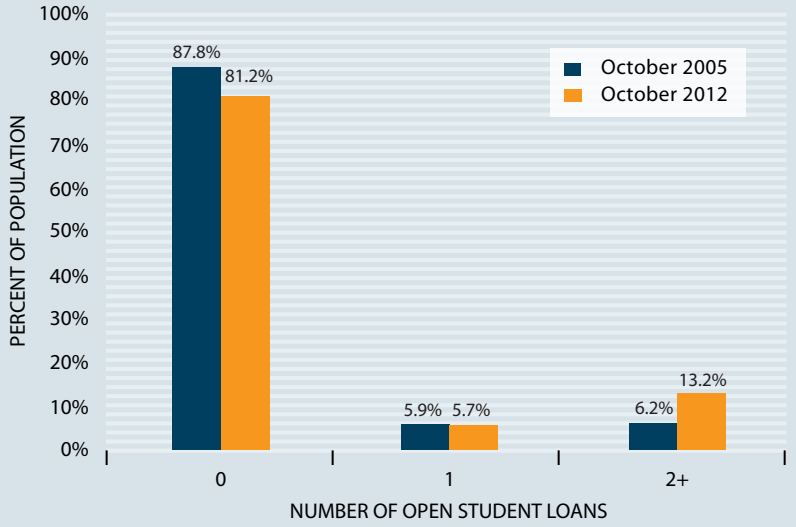
» Quantifying the Growth of Student Loan Debt

With the cost of education rapidly outpacing inflation, more consumers are taking out student loans to pay for their education. A recent study by the Federal Reserve in New York finds that outstanding student loan debt ($870 billion) is now greater than credit card debt ($693 billion) and auto loan debt ($730 billion).[1]

As shown in Figure 1, our analysis found that more than 6% of US consumers, or approximately 12 million, had two or more open student loans on their credit report in 2005.[2] By 2012, this figure had grown to over 13%, or 26 million consumers. The research was based on a large data sample from a US credit reporting agency.

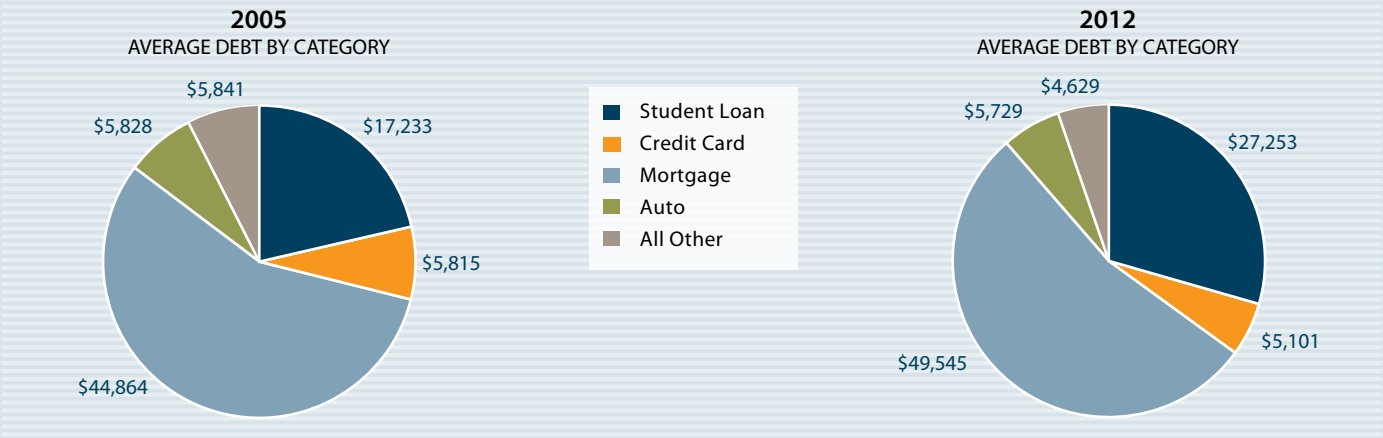
Consumers also have a greater amount of student loan debt today. In 2005, consumers with an open student loan on file had an average student loan debt of $17,233. In 2012, that number increased 58% to $27,253 while total debt only increased by 16%, about one-third as much. Figure 2 illustrates how much the average student loan debt has increased relative to other debt for consumers with student loans.

Figure 1: More People Have Student Loans



This bar chart shows the number of open student loans at two points in time. In October 2012, we see a substantial increase in the number of students who have two or more student loans.

Figure 2: Student Loan Debt Has Grown Much Faster Than Other Debt



The pie charts illustrate the breakdown of debt for consumers with at least one open student loan. The average student loan debt has grown from $17,233 to $27,253. This has outpaced the growth of other forms of debt. Note: not all consumers included hold all other financial products; for example, $49,545 is the average mortgage debt only for student loan holders with a mortgage in 2012.

[1] ***"Grading Student Loans"*** *by Meta Brown, Andrew Haughwout, Donghoon Lee, Maricar Mabutas and Wilbert van der Klaauw.*

[2] *Figures in this paper are based on the population of approximately 200 million US consumers with valid FICO® Scores.*

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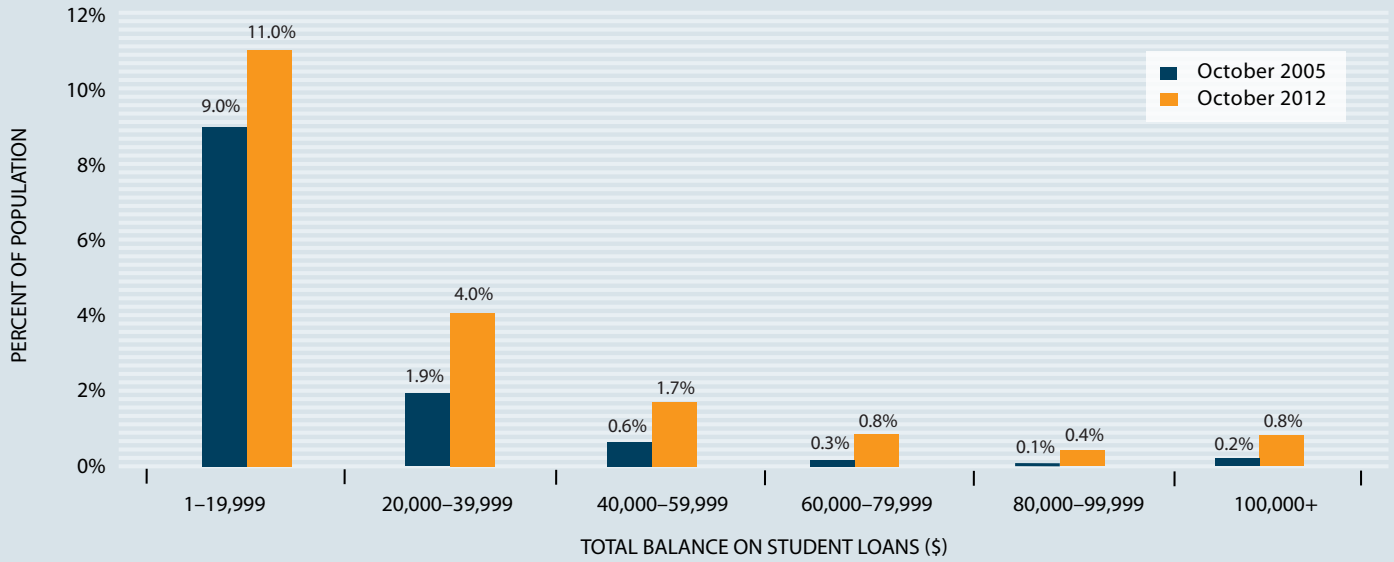
In addition, the percentage of consumers with student loan debt in excess of $100,000 has quadrupled between 2005 and 2012, from 0.2% to 0.8% (see Figure 3). To put this in perspective, there are roughly 1.2 million more consumers with student loan debt in excess of $100,000.

Figure 3: Consumers Have More Student Loan Debt



As the chart shows, total balances on student loans have increased. Each time period does not equal 100% because we isolated only consumers with student loans; those without student loans were omitted. For instance, 87.9% of consumers in October 2005 had no student loan.

» The Growing Risk of Student Loans

The student loan industry has been hit hard in recent years. This is particularly evident from an analysis of student loan default rates.

Figure 4: Student Loan Delinquencies Have Increased

	90+ DPD Delinquency Rate		
	October 2005–2007	October 2010–2012	% Change
Student Loans—Account Management	17.0%	25.1%	47.0%
Student Loans—Originations	12.4%	15.1%	21.5%

"Account management" evaluates the pool of student loans that were opened prior to the observation date. For example, of all student loans opened prior to October 2005, 17.0% of them became 90 days delinquent or worse over the subsequent two years. "Originations" evaluates student loans that were opened within three months after the observation date. For example, for all student loans opened within three months after October 2010, 15.1% of them became 90 days past due or worse during the subsequent 21–23 months.

Figure 4 shows the dramatic increase in student loan delinquencies over the two time periods in our study. Between October 2010 and October 2012, one quarter of student loans were 90 days past due or worse. This represents a significant increase of 47% when compared to the benchmark October 2005–2007 period. Looking at newly booked student loans, the increase in default rates was not as dramatic, but it was still a pronounced 21.5% increase over the earlier period.

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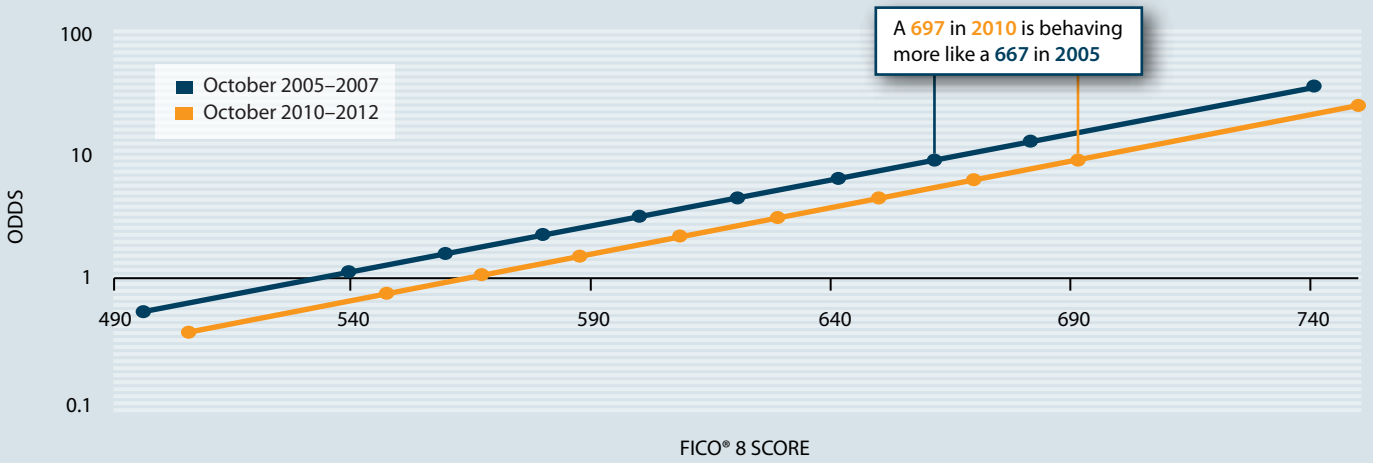
These results are consistent with findings from our quarterly survey of US bank risk management professionals. In fact, in our ***latest survey***, a majority of respondents (59%) expected delinquencies on student loans to continue to rise. It was the fifth consecutive quarter that respondents predicted a worsening of student loan delinquencies. Interestingly, most respondents expected delinquencies on every other type of consumer loan to hold steady or decrease, underscoring the highly targeted concern of lenders when it comes to student loans.

As part of our analysis, we also examined the relationship between risk and score for both existing (account management) and new (originations) student loans. Looking at this odds-to-score relationship for existing student loans, we observed a systemic shift to increased risk throughout the score range.

Figure 5: 30-Point Odds-to-Score Drop for Existing Student Loans

October 2005–2007 vs. October 2010–2012

Existing Student Loans



The plot illustrates an increasing risk of existing student loans; the lower the odds-to-score line, the higher the risk. For example, if lenders set a cutoff score of 667 to achieve 10:1 repayment odds in 2005, they would need to raise their cutoff 30 points to achieve the same level of risk in 2010. Existing student loans are defined as those that are open prior to the observation date.

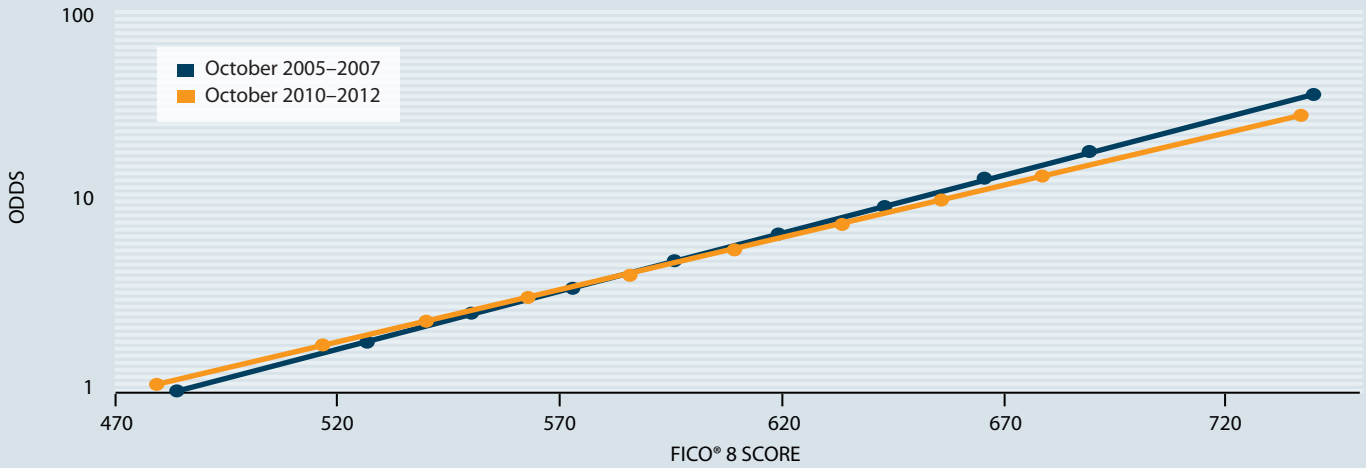
Figure 5 illustrates that in 2005, a FICO® Score of 667 corresponded to repayment odds of 10:1. In 2010, a FICO® Score of 697 equates to the same level of risk. This 30-point offset is quite substantial. It represents a much greater shift than what we've seen in the credit card and auto industries in the wake of the Great Recession.

Our analysis of new student loans revealed a different trend. Here, we observed a slight flattening of the odds-to-score relationship. Figure 6 (on the following page) illustrates that this relationship has remained fairly stable and that the FICO® Score continued to rank-order risk for new student loans.

Figure 6: Fairly Stable Odds-to-Score Relationship for New Student Loans

October 2005–2007 vs. October 2010–2012

New Student Loans

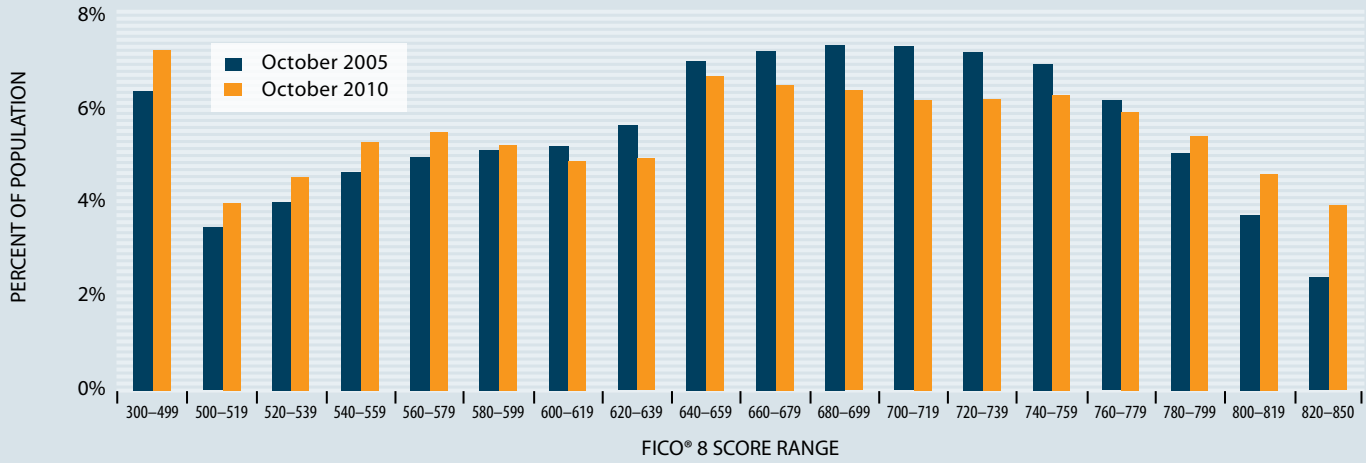


New student loan accounts are those loans opened within three months after the scoring date. As an example, to be included in the October 2005-2007 analysis above, a consumer must have one student loan that was opened in the three months after October 2005.

Figure 7: More Consumers Fall in the Highest and Lowest Score Ranges

Score Distribution Comparison

Existing Student Loans



We see a broadening of the score distribution when comparing student loans on the books as of October 2005 and October 2010. In other words, more consumers fall in the higher and lower scoring ranges in October 2010.

Our study also looked at score distribution dynamics from October 2005 to October 2010. Figure 7 highlights a general broadening of the score distribution for consumers with an existing student loan. In addition, there was a slight shift to lower scores as the median FICO® Score dropped from 670 to 665.

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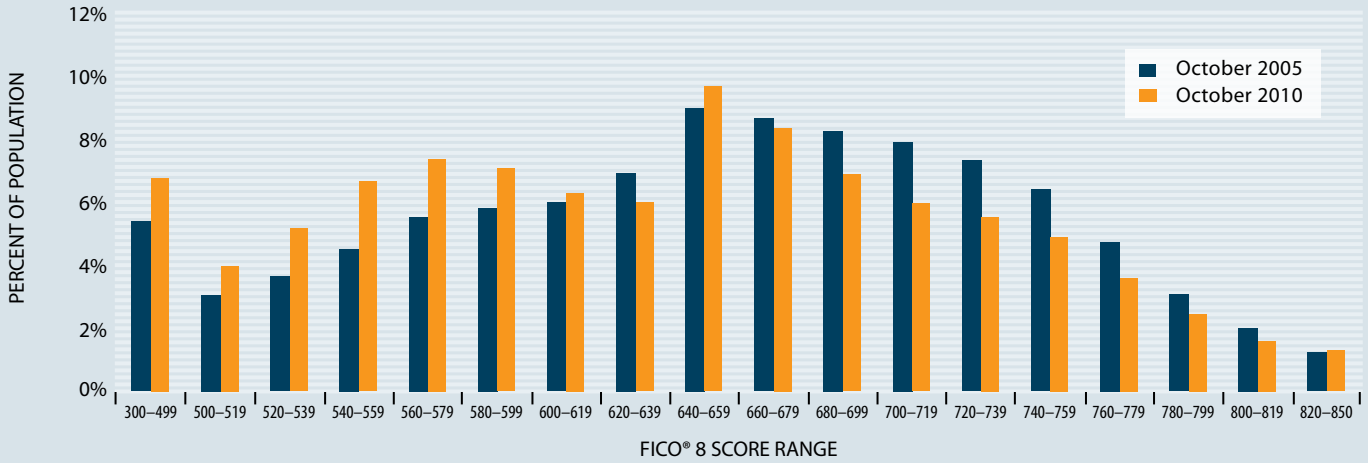
Overall, there are more consumers scoring in the highest and lowest score ranges in the most recent time period. Why? While we don't have enough data to know for sure, the fact that younger consumers are more susceptible to difficult labor and economic conditions could explain the overall increase in lower-scoring consumers. On the other side of the spectrum, the greater number of higher-scoring consumers with student loans may be attributed to older consumers, who have held their student loans for a while, deleveraging in response to the difficult economic times.

Figure 8 illustrates the score distribution trend for new accounts. Here we see a clear shift to lower scores. These findings indicate that in recent years, student loan lenders have made student loans available to consumers with lower credit quality. In fact, the median score for originated student loans has dropped from 659 to 641. It would appear that, as private student loan lenders have exited the market, public student loan lenders have funded higher education at the expense of deteriorating credit quality.

Figure 8: More Consumers Score Lower for Newer Vintages of Student Loans

Score Distribution Comparison

New Student Loans



Comparing score distributions of student loans booked three months after October 2005 and October 2010, we observed a shift to lower scores on the more recent vintage.

Figure 9: Payment Hierarchy Has Not Changed, Except for Mortgages

		October 2005–2007	October 2010–2012	% Change
Bad Rates	Auto Finance	6.6%	7.6%	15.6%
	Bankcard	14.4%	14.2%	–1.2%
	Mortgage	5.3%	11.7%	121.6%
	Student Loan	17.0%	25.1%	47.0%

This chart documents how well consumers with at least one open student loan pay their various credit obligations at two points in time. For example, consumers with at least one student loan in October of 2005 became 90 days late or worse on one of their auto loans 6.6% of the time over the next two years. Consumers with at least one student loan in October of 2010 became 90 days past due or worse on one of their auto loans 7.6% of the time over the next two years. That represents a 15.6% increase in the bad rate.

We also examined changes in payment behavior over time for consumers with open student loans, shown in Figure 9. For the most part, there weren't any unexpected findings. Overall, bankcard delinquency rates were more stable compared to the student loan and mortgage industries.

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Looking at payment behavior between October 2005 and October 2007, we observed an intuitive hierarchy. Consumers were most likely to repay their mortgages first, followed by auto loans, bankcards and student loans, in that order.

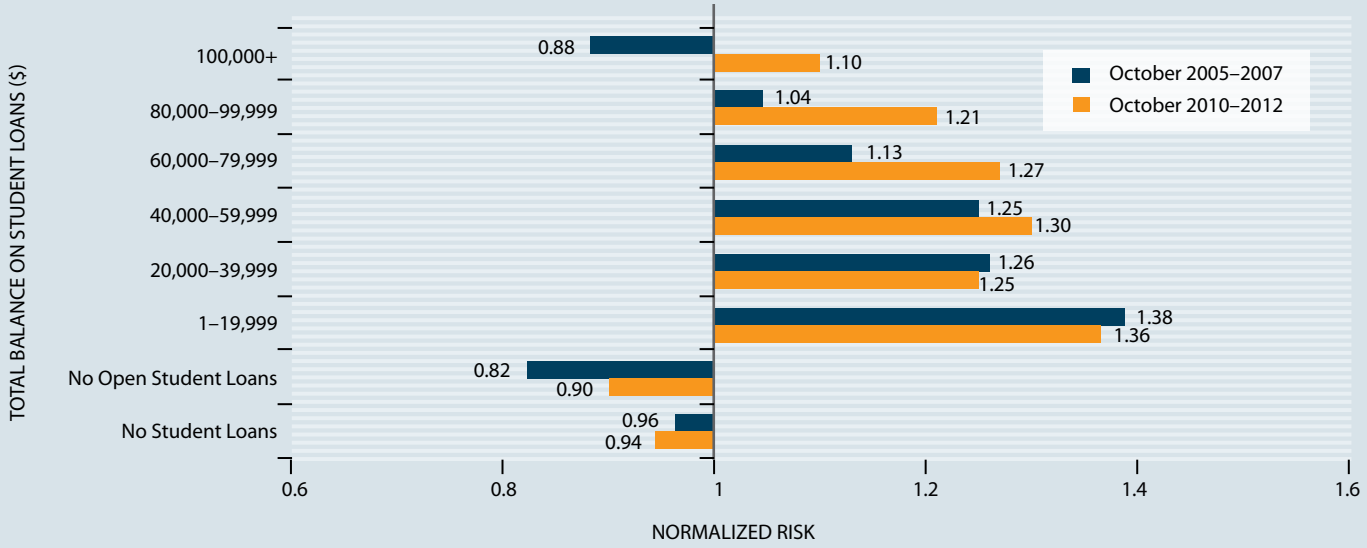
Looking at the more recent payment hierarchy between October 2010 and October 2012, we saw the impact of the mortgage meltdown. Consumers were most likely to pay their auto loans first, followed by mortgages, bankcards and student loans.

» Analyzing the Changes in General Credit Risk Associated With Student Loans

With the increase in student loan debt, has the risk associated with student loan debt changed? Here we see more ominous signs.

Figure 10 illustrates that large amounts of student loan debt are riskier than they were previously. For example, having more than $100,000 in student loan debt was riskier in 2010 than it was in 2005. In 2005, consumers with more than $100,000 of student loan debt performed better than the total population. In 2010, this group was riskier than the total population. In general, this increased risk is seen with student loan debt greater than $40,000.

Figure 10: Consumers With Heavy Student Loan Debt Are Riskier
Changes in Variable Risk Pattern



Normalized risk values on the x-axis are calculated by taking the bad rate observed for a given attribute and dividing that by the bad rate observed for the total population. Risk values greater than 1 indicate that the attribute is riskier than that of the total population. For example, consumers with more than $100,000 in student loan debt in 2010 are 1.1 times *riskier* than the total population. On the other hand, consumers with more than $100,000 of student loan debt in 2005 were 0.88 times *less risky* than the general population.

The "No Open Student Loans" group reflected consumers who had paid off their student loans. Not surprisingly, this group continued to represent better risk when compared to the total population.

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With such noticeable changes in risk patterns, we further tested whether the FICO® Score algorithm needed to be updated to account for these shifts. Specifically, we looked for any evidence indicating that the risk associated with student loans was not being adequately captured by the FICO® Score.

To evaluate this, we created test scorecards for consumers with at least one open student loan. By narrowing our analysis to this population, we could better observe the incremental predictive value of student loan information.

Our analysis revealed that student loan-specific information did *not* provide additional predictive lift to the FICO® Score. This finding, combined with the greater risk that student loan information poses, indicates that the additional risk posed by student loans is being captured by other factors already considered by the FICO® Score.

To put this in perspective, when we conducted similar analysis through the lens of the mortgage industry, we observed that mortgage indebtedness would be more relevant in predicting risk, above and beyond the current set of information captured by the FICO® Score algorithm. This was a key finding that we addressed during the FICO® 8 Score development.

How Do Student Loans Impact FICO® Scores?

While FICO® Scores include student loans in calculations that evaluate indebtedness, student loans are treated like any other installment loan. FICO® Scores do not employ any variables that specifically evaluate and target student loan information. It makes no difference if the student loan is backed by the government or is a private loan from a lender. Nor does it matter if a student loan is deferred. Deferred loans, if reported by lenders, can have a positive, negative or no impact on the FICO® Score, depending on what other credit information is present.

Keep in mind that when looking at the broader credit risk picture, credit card indebtedness has a much greater ability to influence FICO® Scores than installment loan indebtedness. This is because credit card indebtedness has a stronger statistical correlation with borrower performance; in other words, it's more predictive of credit risk.

» Conclusion

With the pain of the mortgage crisis so fresh, it is important to understand how growing student loan debt is influencing consumer credit risk. Our research showed that there has been a clear increase in student loan debt over time. The student loan industry is observing higher rates of default, particularly on older vintages of student loans (as opposed to the most recent vintages).

Analysis of general risk, as opposed to student loan-specific risk, indicates that student loan debt is adequately captured by the FICO® Score. This is an important finding, considering that high levels of student loan debt are reflective of an increased level of general credit risk when looked at in isolation. This indicates that the additional risk observed in student loans is already being captured through the variables currently utilized by the FICO® Score algorithm.

Because of the growing risk in the student loan segment, financial education is even more critical. Many student loan borrowers have relatively young credit histories. It is important to their future financial health that they understand the long-term ramifications of their financial decisions, particularly if they are considering defaulting on their student loan debt.

While the student loan situation parallels the early mortgage crisis in some ways, there is a key difference. A defaulted student loan is not likely to cause the same ripple effect as a foreclosure, given that the student loan industry does not contribute to the US economy to the same degree as the mortgage industry.

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Still, the worsening state of the student loan industry should raise concerns. The combination of lower credit quality, increased debt loads and trying economic conditions will lead to even more distress in the industry. As recent vintages of student loans mature, more stress is inevitable when recent graduates with higher debt loads enter a tight labor market.

Student loan lenders, in particular, need to remain vigilant, tracking their portfolio closely and adjusting strategies accordingly. The fact that the credit quality of consumers receiving student loans today is much lower than it has been historically forebodes growing challenges for the industry.

FICO will continue to monitor changes in the student loan industry, as well as other key trends in the credit risk landscape. We'll publish key research findings in future ***Insights white papers*** *and on our* ***Banking Analytics Blog****.*

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For more information

North America toll-free
+1 888 342 6336

International
+44 (0) 207 940 8718

email
info@fico.com

web
www.fico.com

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