

Demystifying Post-Deferral Student Debt

Benchmarking Risk on a Volatile Population

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Executive Summary

In September 2023, the Federal Government began a 1-year on-ramp period to transition student debtors out of the no-interest deferred-payment world of the COVID-19 pandemic. During the on-ramp, borrowers did not accumulate delinquent statements in the event of missed payments, and interest accumulation resumed. Beginning in October, consumers will begin to have statement-level reporting of delinquencies again, with the customary bureau reported 3-month DQ variables beginning to populate in December. Our experts have studied the data and identified the following key points:

- Given poor credit performance of many of these customers during the on-ramp period, credit scores for the broad population of student borrowers are likely to drop once DQs are properly aged and reported on the bureau; we anticipate a 5-10 point average shift downwards among holders of student loans, with an enormous range of outcomes between customers with the highest and lowest risk
- This shift will not be evenly distributed; data shows that roughly 28% of student debtors are in immediate danger, 26% are in a relative holding pattern that may pivot on the upcoming election, and 48% are in good standing with relatively strong underlying fundamentals (many of whom will see zero actual score impact)

Given these findings, sophisticated lenders should be able to use the credit performance of borrowers during the on-ramp period to project with reasonable accuracy which student loan borrowers are in solvent financial situations versus precarious ones. Any credit policy that tightens the strings on all student loan borrowers will be beaten in the market by institutions that take a more surgical and analytic approach, splitting out the *truly* risky customers from those who are ending the payment pause with substantially more purchasing power than they had going in. Institutions can prepare for the days ahead with the following tangible projects:

• Lenders should develop monitoring targeted specifically at the segments of their portfolio that hold student loans (either right now or at time of booking); close



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examination of ongoing differences within the lender's specialized population will allow financial institutions to isolate specific subpopulations of risk and opportunity on their own unique customer mix.

- Normalizing for overall risk and months on book, lenders should examine trended data to find evidence of behavioral changes and variables that show possible cash-flow decreases. These should be incorporated into new risk model builds, giving builds increased reactivity to tangible state changes within both existing and incoming customer tranches.
- Ensure proper incorporation of student debt and likely payment obligations into Debt-to-Income calculations when making underwriting decisions; additionally, lenders must keep close tabs on the ongoing litigation around various IDR options available for their borrowers, to ensure this understanding is accurately reflected in the most up-to-date DTI calculations.

For more information on this study and a deeper dive into the analytic work we are doing, follow up with your 20S contacts to set up time to discuss this work and other ways 20S can help incorporate new techniques into your modeling environments.

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Introduction

Over 40 million borrowers in the United States have student loans. Once a mid-1900s novelty, rising tuition costs and increased admissions have turned student loans into a necessity for a majority of prospective students. Even a decade ago, with lower tuition rates, an enormous **60%** of Americans who attended college borrowed annually to help cover costs. [1] These loans remain in their wallets well into their careers, forming a foundation of low interest debt that underpins many financial decisions for college graduates, as well as an enormous slice of collective debt among consumers — federal loans alone totaled \$1.61 trillion, as of Q3 2024. [2]

Starting in March 2020, all U.S. federal student loans were placed on deferred payment schedules in order to help mitigate the pandemic's impact. [3] While broad-spanning deferral programs in other loan products had largely ended by the end of 2022¹, student loans have remained in a transitory state. While the period of fully deferred student loans ended in October 2023, a one-year transitory period (referred to as "the on-ramp" throughout this paper) where interest began to accrue and delinquencies were not reported to bureaus was imposed to ensure consumers were able to work their loans back into their monthly cash flow. This period concluded just days ago, with customers now beginning to accumulate months of bureau-reported delinquency (DQ) on these student loans.

With this final loan adjustment ending, we are entering a new stage of the post-deferment era. Going forward, mitigating strategies for at-risk consumers will be limited to those that existed pre-COVID. This one year on-ramp period has revealed a lot about how consumers are reacting to the new normal and given lenders strong signs of the risks, challenges, and opportunities that these customers may represent going forward. In this paper, we analyze the current playing field. We will go over what current public data reveals about the tendencies of these post-deferral borrowers, discuss our findings from surveying our industry partners, and posit hypotheses for how these borrowers may behave going forward on their products outside of the student loan space.

¹ While this is not the focus of this paper, it is important to note that we are carving out personal loans, auto loans, and credit cards in this statement. While mortgage deferral programs are less utilized than they were in the start of the pandemic, many mortgage forbearance programs are still operational with non-negligible numbers of borrowers impacted. One key difference here is that mortgage forbearance programs were (largely) provided on a rolling 6 month basis requiring consistent re-application and cutoffs, whereas student loans were deferred and paused en masse without any variation; ergo, the impact of student loan deferrals ending is a bit easier to project as an effect being rendered on an entire broad population, while the impact of mortgage forbearance programs ending is a bit more open ended. [17]

The Economic Impact of Loan Deferment

Deferment and Credit Scores

When COVID-19 first hit the general consumer, the initial response by financial institutions was to tighten their underwriting — after all, the pandemic represented a massive financial hit to brick-and-mortar businesses alongside enormous uncertainty about the years ahead. As it turned out, this was overly conservative. Due to the highly supportive stimulus measures embraced by legislators in Washington, most consumers actually saw their net creditworthiness improve in the early days of the pandemic, as they found their savings bolstered by the new influx of cash and were able to take on significantly more payment burden. In fact, many consumers significantly improved their FICO scores!

As most readers already know, this rosy picture did not last forever. As we noted in our 2022 COVID era risk trend analysis [4], many lenders pivoted away from a conservative underwriting stance towards aggressive market capture. Once tranche performance trickled in, many realized that a good portion of the COVID-related score improvements was related more directly to deferral programs than they had initially realized. Our research within our partner lenders found that post-booking performance on their middling tier FICO bands exhibited DQ behaviors expected for FICO scores **20-30 points lower** than the scores they were actually booked at.

While FICO and Vantage did an admirable job trying to educate the industry on the impact of deferrals on their scores, many lenders were still caught off guard by the initial risk differential on accounts booked in the 2021-2022 period. In the same way lenders experienced some level of score volatility as many major deferral programs ended, lenders should expect a meaningful change in core scores for some sub-populations of student borrowers within their books. In mid-September, VantageScore did an internal study on expected impacts caused by the end of the on-ramp. [5]

	Estimated % of Consumers with Delinquencies	Impact on the average VantageScore 4.0 from student Ioan delinquency reporting Estimated % by population			
		Likely to pay	Unlikely to Pay	All Paused Borrowers	Overall Population
Scenario 1	76%	+3 points	-82 points	-62 points	-9 points
Scenario 2	41%	+8 points	-54 points	-17 points	-2 points
Scenario 3	34%	+8 points	-49 points	-11 points	-1 point

Figure 1 -- Projected VantageScore impact in December 2024, once DQs are reported

While statements delinquent will begin to accumulate starting in October 2024, all consumers are currently at 0 months DQ according to the bureau reporting pause. The first

month we will actually see reported DQs on many of these loans will be December 2024, when servicers that do not report until 90 days delinquent finally will have data aged enough to report the DQ to the bureau. VantageScore found a major potential impact coming later this year as DQs begin to trickle in. Internal work by 20S backs up this data – we expect anywhere from a **5-10 point decrease in subprime and mid-prime risk scores** driven by the return to normal.

This analysis is further supported by a working paper published by the National Bureau of Economic Research back in 2023. [6] In that paper, the researchers attempted to determine how much customers' FICO scores improved after the payment pause began. NBER split consumers by those who had previously had a delinquent loan and those who had not. They found that those who had not been delinquent experienced a credit score boost of about 2 points, well within any reasonable margin of error. However, with the payment pause curing many existing defaults, those who **had previously been delinquent** saw their scores increase by 28 points.

We feel that it is critically important to emphasize the following point: many consumers have repaid their debts, used Income-Driven Repayment (IDR)² plans to decrease their overall debt burden, or simply found themselves in a better financial position than they were pre-COVID. As a result, approaching the impending end of the on ramp as a time when all student loan borrowers are at an increased risk is not only a potential fair lending violation, but also an overly simplistic framing. There is a **clear bifurcation in risk** between those who are at risk of severe delinquency and those who are in relatively clean financial shape.

Any credit policy that tightens the strings on all student loan borrowers will be beaten in the market by institutions that take a more surgical and analytical approach, splitting out the *truly* risky customers from those who are ending the payment pause with substantially more purchasing power than they had going in.

Borrower Behavior During the On-Ramp

Due to the lack of delinquency information on the bureau, it is difficult to find strong bureau indicators of borrower behavior on student loans during the on ramp. Most efforts to do so run into the same fundamental flaws – bureau tradeline data is messy, and it is extremely difficult to differentiate between borrowers whose payments are currently \$0

² As per Brookings, "Income Driven Repayment is an umbrella term for that applies to four distinct plans available to borrowers with federal student loans – Pay as You Earn (PAYE), Revised Pay as you Earn (REPAYE), Income-Based Repayment (IBR) and Income-Contingent Repayment (ICR). These plans differ in the length of the repayment period, the types of loans that are eligible, and the percentage of income above the income protection allowance that borrowers are required to pay." [16] In addition to these four programs, IDR also encompasses the SAVE program, a recent attempt by the Biden administration to provide additional federal relief for student loan holders. As we will discuss later, SAVE is in an ongoing legal battle, and this uncertainty has added to the confusion around these various options.

due to a deferral/IDR versus borrowers whose payments are \$0 due to nonpayment that should be reported as a delinquent statement.

With such a high margin of error on bureau-analyzed data in this space, it can be useful to examine survey data to get additional context on how borrowers treated the 1-year onramp. To that end, Pew recently released a survey of 1,533 federal student loan borrowers taken during the summer of 2024. [7]

When digging into the survey data, the results revealed a lot of good news. A full 75% of borrowers were currently on an IDR or making **full, on-time payments** — meaning that three fourths of student loan borrowers are in a good place to maintain their current credit



Figure 2 -- Summary responses from Pew's Student Loans Return to Repayment Survey (n=1,378)

performance as the on-ramp period ends. That does still leave **25% of student loan borrowers** who are currently making either no payments or irregular partial payments. Digging deeper into the survey data, we found that nearly half of these borrowers had exhibited irregular payment behavior prior to the payment pause.

This re-emphasizes our earlier point – even with a margin of error, roughly one fourth of borrowers holding student loans are currently in danger of imminent credit stress in Q4 2024,

even though these borrowers are not currently reported as delinquent to the bureau on their student loans. It is highly plausible that some of these borrowers are already being filtered out of many credit policies due to other existing sloppy payer or delinquent behavior – however, even with 25% as a high-water mark, this represents a reasonably large population with a clear incoming risk.

Credit Risk Implications

Differentiating High-Risk and Low-Risk Borrowers

As previously noted, differentiating between high-risk and low-risk borrowers in the student loan space is (at best) an inexact and difficult science. Much of our useful student loan data is now several years old, placing it on the fringes of eligibility for most active credit risk models. Despite the difficulties, deep analysis of a lender's book can signal enough to a clever institution to help split customers into these two distinct subgroups.

Returning to the Pew survey referenced in the prior section [7], Pew specifically noted that borrows who do not successfully engage in repayment by making payments or selecting a repayment plan in the first three months are a full **2.5 times more likely to default** on their loans than other borrowers. As one would expect, payment patterns that begin in these first few months of active on-bureau student loan delinquencies will be both indicative of and influential to long-term success. This is both correlative AND causal. Armed with this, a careful lender can use this to their advantage in two ways:

- First, it helps establish that on-book customers who do not experience specific measurable behavioral changes are more likely than not to continue performing at the pace a lender can expect on their prior data. This is helpful context, as it implies that customer management models like credit line increase models will (likely) remain similarly powerful; so long as your internal customer measurement models are properly assessing the ongoing behavior of your customers, the correlated stress from the initial push will influence your customer management models appropriately.
- Second, it helps establish a clear way to increase signal on student loan borrowers, whether they are applying for new loans or term changes to their existing loans: **embrace recency.**

For most lenders, weighting data on recency has always been an effective way to increase overall signal; 20S has always been a firm proponent of utilizing an individual borrower's comparative data over time within one's model structure to help isolate and action on behavioral changes as quickly as possible. Building models that are reactive to changes in customer behavior is a critical way for a lender to isolate populations of highest risk before competing lenders do³. It also allows a lender to more quickly identify customers with positive behavioral shifts,



Figure 3 -- % of Student Loan Holders with a new product during the 2020-2023 deferral period, via TransUnion

allowing for improved product terms and offers to its best customers earlier.

³ There are many ways to achieve this; a few examples would be to designing variables comparing 3-month averages versus 12-month averages to isolate specific qualitative behaviors, sloping month-by-month performance, or measuring on/off performance via comparisons of internal data to bureau data.

There's good news, however: we have ample evidence that the extra cash flow consumers enjoyed during the last 4 years⁴ has actually **increased** the on-bureau signal lenders can derive from these at-risk borrowers. As seen in Figure 3 above, per a study by TransUnion, student loan borrowers took on new products at a high rate since the beginning of the pandemic. [8] Given the lessons of the Pew study, the message is clear: consumer performance on their newest products will be valuable to help isolate customers exhibiting changed behavior.

There are many ways that existing structures within financial intuitions will naturally help filter out the student loan borrowers who represent the highest risk. The Pew study noted that borrowers who did not complete their degree were **2 times as likely to experience payment stress or default** versus those who finished their schooling. This finding isn't *directly* useful for a lender's assessment of a borrower's risk, as data on educational attainment is unlikely to be collected by a lender.⁵ However, there isn't necessarily a firm requirement to add extra handling for this specific finding, as this particular relationship is already being partially covered through a lender's ability-to-pay calculations – among the full U.S. population, the Current Population Survey from the U.S. Bureau of Labor Statistics reports an unemployment rate of 3.3% for consumers with "some college" versus 2.2% or less for consumers with an advanced degree, in addition to a 1.5-2x multiplier on median weekly earnings. [9]

Forecasting the Coming Year (High-Risk)

Earlier this year, a paper was published through the Federal Reserve Bank of Philadelphia's Working Paper Research Division analyzing the impact of student loan payments on borrower outcomes. [10] The paper was not explicitly connected to the current switch to normalcy, but a core piece of the authors' analysis centered around projecting the forwardlooking outcomes of the population of borrowers taking Income-Driven Repayment (IDR) plans. The paper itself is a powerful, well-constructed study that warrants any reader's attention. In a study of borrowers on IDR plans in the 2015 to 2018 time period, the researchers had two core findings relevant to our analysis here:

• In the short term, IDR payment plans lead to clear reductions in delinquency and default risk on the student loan itself. This makes sense, as per the terms of an IDR plan, borrowers owe little-to-nothing so long as their income stays below a certain

⁴ The NBER study noted earlier included an estimate of the increased cash flow during the pandemic; it estimated a \$138 increase in monthly cash flow, which coincided with increased credit card spending and the increased product volume referenced in Figure 3. [6]

⁵ And even if it was, this specific information would be subject to some debate over whether it is usable data to deny credit to a prospective customer. In 2020, the U.S. Senate's banking committee held hearings on the use of educational data for credit decisioning. While they did not touch directly on the question at hand (completion versus non-completion of a student's degree), they did note explicitly that utilizing major or school within one's underwriting would (potentially) constitute prohibited factors per their reading of Reg B and ECOA. While no element of this document represents legal advice, utilizing

level, freeing up significant cash flow.

• However, in the aftermath of the plans, usage of IDR does not project out to sustainable long-term outcomes for borrowers. Once the IDR plan is removed and the borrower is moved to a more traditional loan structure, the borrower immediately behaves like their broader peers, with no long-term influence from the presence of their IDR.

To dig deeper, the researchers found that there was a roughly 2% decrease in default rate on borrower student loans after the IDR kicked in. However, at the point at which borrowers were required to re-apply for IDRs, that small decrease in default rate completely evaporated, with zero ongoing effect . . . even though many of those customers *did* get IDRs re-upped. The paper proposed a few theories for why this is. In our view, the most compelling theory is that the discontinuous nature of post-IDR loan payments applies additional pressure as compared to their peers. Others in their cohort would have figured out how to fit their overall payment into their income; those who are on an IDR may instead find themselves with a severe payment shock after their IDR ends, jumping from \$0 to \$200-\$500 a month without sufficient preparation.

This presents a potential long-term problem for lenders. A huge portion of borrowers are on IDR plans, and these plans are not guaranteed to last forever. In the most recent report by the U.S. Department of Education, \$681 billion of the cumulative \$1.61 trillion of U.S. student debt was localized within IDR payment plans. [11] While these plans will certainly exist into next year, it is likely that the long-term fate of these plans will depend both on which party wins the 2024 presidential election (as it is unlikely a potential Trump administration would continue to push for these programs) and how the U.S. Supreme Court rules on the various legal artifices around the implementation of various IDR options. The Supreme Court has already issued a temporary stay on the SAVE plan (a means to give more borrowers access to IDR payment plans) earlier this year. [12] In the event that they rule against SAVE and continue to push back on a potential Harris administration, it is entirely plausible that many of these IDR customers will be forced off their current plans and will experience the same discontinuous increase in debt burden in the coming years. This is important – recall how the earlier Pew survey indicated that a full 28% of borrowers are currently on IDRs.

Taken together, this represents a significant forward-looking risk for lenders; by definition, the majority of those 28% are localized within lower income portfolios, meaning that this risk is much more likely to impact the riskiness and cash flow of customers who are already more likely to be struggling to make payments, or already exhibit sloppy payer behavior on their other subprime loans.

Forecasting the Coming Year (Low-Risk)

Having shared a bearish prognosis for high-risk borrowers, it is important to point out a few mitigating factors. First, this has been an incredibly volatile few years within the student loan market. Constant legal challenges, servicer changes, and policy revamps have led to a highly uncertain landscape for most consumers. As such, it is reasonable to note that consumers who are on a brand-new IDR plan were able to figure out how to navigate these confounding (and often labyrinthine) context changes.

This volatility was not strictly present from 2015-2018 in the period of the data referenced in the Philadelphia Fed working paper. While we still think the data is highly indicative, concerning, and broadly applicable, it is important to note that presence of a new IDR (amid the ongoing deferral environment and the generosity of the on-ramp period) does represent at least some additional awareness by the borrower of both their own situation and the broader situational context their debts exist in. We would thus posit that IDR presence would be at least partly indicative of a consumer who is aware enough of their own financial situation to fit into one of two groups: customers who have already applied for and utilized new products to try to deal with their challenging financial situation (indicating data on their performance can be inferred through performance on morerecently opened products, like credit cards or PLs), or customers who are well aware of their current debt load and disinclined to add to it.

Having discussed IDR customers at length, we would be remiss not to re-emphasize that the student borrower population does contain substantial populations of promise. Outside of the 28% IDR and 26% sloppy/no-payment customers, 46% of student borrowers are making **full, on-time payments**. Even in the maximally conservative scenario where all IDR customers represent forward-looking credit risk, that still means that **roughly half of all student borrowers continued to make on-time payments** and have largely improved their credit since the beginning of the pandemic. As discussed earlier, a substantial portion of these borrowers did this despite adding new products to their docket.

There are a variety of reasons why this population of decreasing risk exists. Partly, this is due to the way the loan balances are actually aligned. As of 2019, loans for graduate school degree programs constitute 55% of loan balances while only making up a scant 29% of the borrowers. [13] As these borrowers hold more of the balances, they gained an unusually large benefit from the payment pause (relative to the broader population of student debtors). Per the 2019 Survey of Consumer Finances (i.e., the most recent numbers prior to the volatility of the post-COVID period), those making greater than \$130,000 annually paid (on average) \$10k in annual loan payments, relative to \$5k for those making \$30,000. [14]

In sum, this means that the payment pause was significantly more beneficial to consumers with graduate degrees and consumers with high existing incomes. Though these customers were able to reasonably meet the payment burden of their student loans, the pause (and on-ramp) have been boons for their overall financial stability and their overall household fundamentals. This is especially true when pairing their higher loan balances with the high inflation present during the early 2020s. With 4.7%, 8.0%, and 4.1% inflation over 2021-2023 [15], there was a substantial erosion to the real value of the future liabilities held by these high-income, high-education borrowers.

Pairing that with the payment pause freeing up over \$10,000 in annual spend to bolster their overall cashflow, these customers represent an extremely strong, resilient, and wellequipped subpopulation that would be unlikely to experience serious negative consequences from the resumption of payments and the end of the on-ramp. Approaches to the coming quarters that feature blunt unsophisticated approaches to student debt handling would create a significant risk of downplaying the improving condition of this wide span of borrowers.

Conclusion & Recommendations

While it is unlikely to be as much of an increase in risk as what institutions experienced with late-pandemic COVID-booked tranches, the final wind-down of student loan deferrals is going to cause major risk impacts across the lending spectrum. Our initial view is that most lenders are likely to respond conservatively to the end of the deferral period. After all, per our earlier VantageScore notes, it is likely that there will be some level of "underachievement," where customers booked at a 650 FICO range perform like a 640 FICO customer in actuality, potentially putting edge case approvals at risk for markedly worse outcomes.

Given this projection, a crudely conservative strategy in the coming quarters could simply assume a level of score decrease for customers with student loans on file and action based on the student loan carve-out attributes accessible from your bureau attributes. A specific policy carve-out like this would (likely) avoid a firm's worst-case scenario.

However, given our research and views of the portfolios among our partner banks, we **do not** think a flat conservative approach is the overall best way to approach the end of the on-ramp. There is ample evidence that the on-ramp period has had its desired effect – the slow resumption of payments has allowed lenders to get a unique look at how consumers are adjusting to the new debt before the new debt becomes a true charge-off.

Clever lenders will be able to use things like trended comparative attributes, assessments of recently opened products, and tactical examination of a borrower's overall credit trajectory to help differentiate customers with a high propensity to decrease in creditworthiness from more stable consumers within the population of student loan borrowers. In addition to these analytic steps, lenders can prepare for the days ahead with the following tangible projects:

References

- Lenders should develop monitoring targeted specifically at the segments of their portfolio that hold student loans (either right now or at time of booking); close examination of ongoing differences within the lender's specialized population will allow financial institutions to isolate specific subpopulations of risk and opportunity on their own unique customer mix.
- Normalizing for overall risk and months on book, lenders should examine trended data to find evidence of behavioral changes and variables that show possible cash-flow decreases. These should be incorporated into new risk model builds, giving builds increased reactivity to tangible state changes within both existing and incoming customer tranches.
- Ensure proper incorporation of student debt and likely payment obligations into Debt-to-Income calculations when making underwriting decisions; additionally, lenders must keep close tabs on the ongoing litigation around various IDR options available for their borrowers, to ensure this understanding is accurately reflected in the most up-to-date DTI calculations.

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Appendix

Student Loan Market Structure

While this is not essential context to understand the impacts of the deferral period ending, the student loan market has quite a few products with different structural attributes. To understand how the market works, it is often helpful to understand what products are offered.

Loan Type	Details	Key Features			
FEDERAL LOANS					
Direct Subsidized Loans	For undergraduate students with financial need. The government pays interest while in school.	Interest is subsidized by the government while the student is in school at least half-time and during deferment periods.			
Direct Unsubsidized Loans	Available to undergraduate, graduate, and professional students. No need to demonstrate financial need.	Students are responsible for paying all interest, including while in school. Interest accrues and is added to the principal if not paid.			
Direct PLUS Loans	Available to graduate/professional students or parents of dependent undergraduates. Credit check required.	Higher interest rates compared to other federal loans, and interest starts accruing immediately unless deferred.			
Direct Consolidation Loans	Allows borrowers to combine multiple federal loans into one loan with a single payment.	Helps manage loans by consolidating them under a single interest rate and			

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		repayment schedule, though may lose certain repayment benefits.				
PRIVATE LOANS						
Private Student Loans	Issued by private banks, credit unions, or other lenders for education expenses.	Higher interest rates than federal loans. Terms vary significantly by lender. Requires credit check and may have variable or fixed interest rates.				
Private Parent Loans	Loans offered to parents by private lenders to cover the cost of their child's education.	Similar to federal Parent PLUS loans but often with higher interest rates and fewer repayment protections.				
LEGACY LOANS						
FFEL Loans (Discontinued)	Federally guaranteed loans issued by private lenders prior to 2010.	No longer issued, but still in repayment. Can be consolidated into Direct Loans to qualify for more repayment options and forgiveness programs.				
Perkins Loans (Discontinued)	A now-discontinued program where loans were issued by schools and guaranteed by the federal government.	Although discontinued, existing loans are still in repayment. Offered to students with exceptional financial need.				

Acknowledgements

This report was prepared by Aaron McGuire, Mara Albaugh, and Edon Tamir.

- **Aaron McGuire** is an Associate Principal at 2nd Order Solutions; he has built statistically rigorous acquisitions & customer management risk frameworks across the industry for dozens of financial institutions. He helped build and champion the first productionized ML models at several key worldwide lenders. His research interests include the application of modern machine learning techniques to lending, a focused approach towards maximal regulatory compliance, and discovering new techniques to project the unknown future of our industry's customers.
- **Mara Albaugh** is an Associate Principal at 2nd Order Solutions; she has overseen multiple due diligence projects covering all stages of the credit cycle, developed customer management models, overseen builds of complex recommender modeling solutions for cross-sell optimization, and managed card valuation models. Previously, Mara was a Principal at Bates White where she specialized in projects involving mortgages and RMBS.
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For more information on this study and a deeper dive into the analytic work we are doing, follow up with your 20S contacts to set up time to discuss this work and other ways 20S can help incorporate new techniques into your modeling environments.