



nonPrime101 WHITE PAPER

What's 36% Got to Do With It?

Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

BY RICK HACKETT¹

Introduction

CFPB (the Bureau) defines “covered longer term loans” that will be subject to its proposed new rule² as loans that (a) have a term of more than 45 days, (b) involve lender charges at an all-in APR over 36%³, and (c) require a “leveraged payment mechanism” of either access to the consumer’s bank account or a lien on the consumer’s vehicle. The rule imposes significant burdens on lenders, ranging from a rigorous additional layer of regulatory underwriting to restrictions on refinancing and burdensome recordkeeping. The rule will very likely constrain the eligible borrower pool and thereby constrain revenue.

The selection of 36% yield (however computed) as a trigger for these burdens is very important, both to industries that will be affected and to consumers who may face denial of access to credit. But the Bureau has published no research to support this choice. Rather, it is based solely on a Congressional edict in the Military Lending Act, a 2007 law that imposed a 36% all-in usury limit on loans to service members and their families.

This paper looks at a dataset of 1.1 million installment loans made at a wide range of interest rates (under 10% to over 800%), including both online and storefront origination platforms, in order to ask whether 36% is in fact a point at which the harmful lender behaviors alleged by the Bureau begin to occur.

1.1M

THIS PAPER ANALYZES 1.1 MILLION
LOANS TO TEST CFPB THEORIES ON
ABILITY TO REPAY

1. Rick Hackett is a Special Policy Consultant to nonPrime101, and was formerly the Assistant Director for Installment and Liquidity Lending Markets at the CFPB. This report is based on statistical analysis by Heather Lamoureux, Research Associate for nonPrime101.

2. <http://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-proposes-rule-end-payday-debt-traps/>

3. The 36% computation includes not only interest and lender fees but also 100% of charges for “credit related ancillary products” like credit life insurance and financed auto club memberships. The computation assumes these produce profits equal to 100% of the retail cost, which raises policy issues that are beyond the scope of this paper.

Regulatory and Market Context

Presaging its June 2, 2016 publication of a Notice of Proposed Rulemaking (“NPRM”), the Bureau published voluminous studies of single-payment (payday) loan usage in 2013 and 2014. It based its approach in the NPRM on those studies (and others) relating to payday loans. Based on those studies, the NPRM asserts that short-term loans are structured and marketed as short-term solutions to a short-term problem, but in too many cases they become a long-term aggravation of chronic financial distress. CFPB’s solution for the short-term market requires that short-term (45 days or less) loans either be rationed severely⁴ or conditioned on a detailed underwriting process that solves for borrower residual cash flow solvency (Ability to Repay or ATR). The lender must find, based on verified information, that the borrower has income sufficient to cover all existing legal obligations, all basic costs of living, and the new loan payment, without coming up short during the loan period and for 30 days thereafter (hereinafter the CFPB ATR test or ATR).

The proposed rule then imports this ATR solution for the short-term loan market to loans of any duration that cross the 36% and collateral thresholds. The Bureau’s view, expressed in their “Market Concerns” section of the NPRM, is that the same harms found in the payday loan market can be built into a longer term loan, because – at a very high yield – a lender can ignore the consumer’s ability to perform as agreed and still make a profit, because high interest income will cover high defaults and a “leveraged payment mechanism” will delay defaults.

The Bureau’s decision to cover longer term loans in a rule that began as a solution to the “payday problem” is based in the Bureau’s expressed concern that creative lenders will circumvent and evade limits targeting payday by restructuring the product⁵. The Bureau may be right about creative structuring. We have already reported about the migration to installment lending models in the online small-dollar lending industry⁶. One can easily imagine a quasi-payday loan that is underwritten in the same manner as a current storefront single-pay loan but involves six payments amortizing \$350 (the median payday loan amount) at 351% APR (the yield on a current payday loan)⁷. Based



DO LENDERS PAY LESS ATTENTION TO CONSUMER ABILITY TO REPAY AS INTEREST RATES INCREASE? DO CONSUMERS FAIL MORE AT HIGHER INTEREST RATES?

4. [Our studies suggest that CFPB rationing rules would limit access to about 20% of current borrowing](#). See proposed 12 CFR 1041.7.

5. Indeed, on the same day that it published the NPRM, the Bureau published a Request for Information seeking public input on, inter alia, any ways that it had left the door open for continued consumer harms in the proposal. Both the Bureau and the Department of Defense have expressed concern that the more targeted DOD regulations that focused on narrowly defined payday loans were quickly circumvented through product redesign. See http://files.consumerfinance.gov/f/documents/RFI_Payday_Loans_Vehicle_Title_Loans_Installment_Loans_Open-End_Credit.pdf.

6. [Report #5](#)

7. We note that such a loan would not be permitted under state statutes in the vast majority of states, but CFPB appears agnostic about what is and is not permitted under state law.



WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

on current use patterns for storefront payday loans, such a loan would default at the same rate and produce the same net yields as the mean storefront payday loan⁸. Thus, the reality of non-prime lending economics and consumer behavior likely forced the Bureau to wade into installment lending, if it wished to actually curtail the business model it perceives in the single payment industry.

Once it was clear to the Bureau that the rule could not be limited to single payment loans, the necessary next question was how to define the outer limits of the rule. If it applied to all loans, it would run directly into markets that had no connection to the harms the Bureau saw, many of which (such as mortgage and credit card) already have their own approach to limiting unaffordable lending. The Bureau could have chosen a maximum duration for coverage (e.g., one year), but it is conceivable to structure profitably a very high yield loan that nominally lasts a year, intending only to collect four or six payments before default, thereby circumventing the rule. The Bureau could also have selected a maximum loan amount (e.g., \$5000), and there is a very good argument that at a high enough principal amount, non-prime lending is very rare. Instead the Bureau chose to focus on two outer limits. The first, use of a "leveraged payment mechanism" is thought to facilitate making unaffordable loans by forcing the consumer to prioritize payment of the subject loan, even at the expense of foregoing other obligations or necessary expenses. The second, a "high rate" of 36% is held out by the Bureau as a point where the interests of the borrower (in performing as agreed) and the interests of the lender (in making a profit after losses) diverge.

In support of its views, the Bureau published a study of payday installment loans made at a median rate of 249%⁹ and auto title installment loans at a median rate of 259%. Both had high default rates, suggesting that borrowers might be harmed. The Bureau did not attempt to discern whether similar levels of consumer failure to perform as agreed or lack of affordable payments existed between 36% and 250%.

8. Our analysis of payday loan utilization and default patterns are found in Reports 7, 7B and 7C on nonprime101.com.

9. <http://www.consumerfinance.gov/data-research/research-reports/supplemental-findings-payday-payday-installment-and-vehicle-title-loans-and-deposit-advance-products/>

This paper makes such an effort. We do so in two ways. Using a random sample from a very large, very diverse set of installment loans made in 2015 and 2016 by 30 lenders, both online and storefront, we review both the consumers' ATR and the loan performance, in each case cross-tabulated with APRs ranging from below 10% to above 800%. We ask two questions:

- (a) Using CFPB ATR measurements for each borrower, do lenders charging higher rates tend to make a larger percentage of loans to consumers who cannot afford the payments (the core CFPB thesis for using a rate-based coverage trigger)?
- (b) Are borrower failure rates (delinquency and default) progressively higher as rates increase?¹⁰

36%

**ATR DOES NOT DECLINE AT 36% APR
IN THIS DATASET.**

**REAL DECLINES IN ABILITY TO
REPAY ONLY OCCUR AT TEN TIMES
THAT RATE.**



Summary Conclusions

In this dataset, the 36% trigger chosen by the CFPB is not associated with any differential in the likelihood that a borrower will have the ability to repay. Nor is there a trend in lender behavior suggesting that higher rates are associated with more insolvent borrowers (by count or by depth of insolvency) until one examines loans at rates 10 times higher than 36%. Finally, there is not a clear correlation between increasing APRs and increased rates of financial distress, although there is an increase in rates of defaults for online loans that begins around 80% APR and peaks at 299% APR. Storefront loans maintain low default rates until reaching the 400+% APR range.

10. While the existence of a leveraged payment mechanism in some (but not all) of our loans may delay evidence that a loan causes financial distress (because the borrower shorts other obligations to keep the loan current), the evidence from both payday loan histories and the Bureau's own research is that unaffordability ultimately shows up in payment histories of "leveraged" loans – within a few months of origination.

The Dataset

We started constructing our dataset by pulling unsecured consumer installment loans reported by 30 non-bank lenders to Clarity Services, Inc. between May 1, 2015 and April 30, 2016. We excluded auto secured loans, and this paper does not address lender behaviors in that market segment. Our complete sample includes 1.076 million loans. **Appendix A** provides descriptive statistics on the loan amounts, APRs, payment sizes, consumer locations and whether the loan was originated online (consumer not present) or in a storefront (consumer present). All of the not present loans involve ACH access to a consumer deposit account. The consumer present loans are made in storefronts that also offer other loan forms, such as payday or auto title, and a majority of those loans by count are made by lenders who use a paper check as collateral for an installment loan, where the borrower does not provide ACH access. Thus, most, but not all, of the consumer present loans would be covered loans.

We chose an extremely wide range of product terms, from under \$500 to over \$5000 in loan amount and from under 10% APR to over 800% APR.

We then took a random sample of the loans and borrowers totaling 76,036 and appended full credit report data from a national credit bureau and from Clarity production data. There resulting "Full Data Sample" is de-identified.

Finally, we created a "Full Performance" subsample from the Full Data Sample. The former includes 69,322 loans for which we have either (a) complete coverage of all scheduled payments within the date range of the sample, or (b) at least six months of scheduled payments before the end of the sample. A majority of "Full Performance" loans were scheduled to be paid in full before the end of our date range. **Appendix A-1** provides descriptive statistics on the loan amounts, APRs, payment sizes, consumer locations and whether the loan was originated online (consumer not present) or in a storefront (consumer present) for the "Full Performance" subsample.

10-800

THIS PAPER ANALYZES LOANS AT APRS RANGING FROM BELOW 10% TO ABOVE 800%



Analysis Part One: Does Affordability Decline as APRs increase?

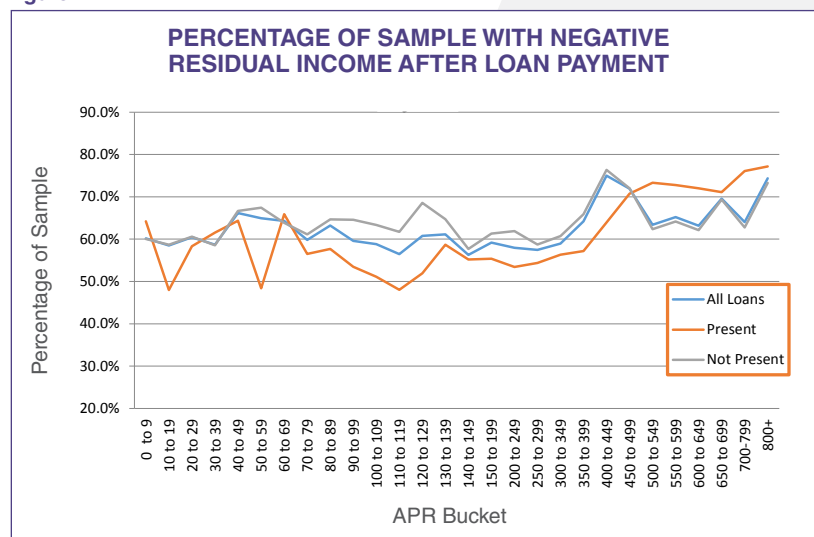
Step One: Compare APR to Positive/Negative ATR (Residual Income)

In our [Report #9](#), we describe our data sources and methods for computing the residual cash flow values for borrowers, both before and after a loan payment. We used the same code and data sources in preparing this paper¹¹. Our method replicates the CFPB ATR computation prescribed in the NPRM, assuming a lender uses proxies to estimate expenses other than shelter, as opposed to manually creating a consumer-specific budget for all basic living expenses. Our method precisely replicates the CFPB requirements for analyzing debt service obligations. Thus, our computations are highly reliable for net cash flow after debt service and a close approximation of the effects of CFPB regulatory underwriting requirements, which solve for net cash flow after debt service, basic living expenses, and the covered loan payment.

The CFPB hypothesis set forth in the NPRM is that high rates combined with a mechanism to force payment prioritization in favor of the covered loan entice lenders to make unaffordable installment loans. CFPB defines high as 36%, computed as described above. If that hypothesis is true, then higher loan yields should correspond with decreasing residual income values, and residual incomes below 36% should tend to be positive – more so than residual incomes at, for example 360% APR.

In order to test this hypothesis, we sorted loans into buckets of 10% APR increments, from 0-9% to over 800%, and computed the percentage of borrowers with negative residual income (cash flow insolvent borrowers) in each bucket. The results are in **Appendix B, Table 4. Figure 1** summarizes these results.

figure 1



11. For this paper, we used median 2015 income values, where we had multiple income values from multiple applications in the relevant date range.



WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

As seen in **Figure 1**, the data does not support CFPB's hypothesis. Negative ATR percentages fluctuate from 56% to 65% of loans from under 10% APR to approximately 400% APR. There is no upward trend that corresponds with increases in the APR until that point. Instead, the percentage of borrowers with negative ATR fluctuates up and down between 56.3% and 66.2%, before spiking to 75.0% at 400-449% APR. And the percentage of borrowers with negative ATR then drops again into the 60s at higher rates.

These results are extremely counterintuitive, assuming that residual cash flow corresponds with affordability. A lender receiving 10% annual return on principal certainly could not stay in business if 60% of its loans were unaffordable.

We then tested whether the covered loan payment was the primary cause of the problem, with results shown in **Appendix B, Table 3**. That table shows that, where roughly 60% of borrowers are cash flow insolvent with the covered loan, roughly 50% are cash flow insolvent before the loan.

56.3–
66.2

LOANS THAT "FLUNK" CFPB ATR RANGE FROM 56.3% TO 66.2% WHEN APRS RANGE FROM 10% TO 400%. THE PERCENTAGE FLUCTUATES UP AND DOWN AS RATES INCREASE. THERE IS NO TREND OF INCREASINGLY NEGATIVE ATR.

Observations

The very high failure rates we observe in applying CFPB ATR (or at least the version that can be automated) to existing installment loans suggests that only 40% of current installment borrowers will retain access to credit under the NPRM. Why is this?

First, the BLS/Census data that underlie the automated proxies for computing residual cash flow also show that, in the relevant income ranges, the average consumer is insolvent by an amount on the order of \$2000 a year¹², before adding any debt payments from any source (prime or non-prime) to these consumers' budgets. This reflects the fact that consumers have a number of adjustments to income and expenses that may not be fully captured in the BLS data and are definitely excluded from the CFPB computation. First, there are earned income tax credits that can easily exceed the average net insolvency we observe but are affirmatively excluded from the CFPB computation. Second, there are transfer payment values which, when in-kind or quasi in-kind are not in the formula. The former include Medicaid and the latter SNAP (food stamp) benefits.

Second, consumers in the relevant income ranges make choices that are obscured by using mean values for expenses. A good example is expenses for formal child care, which are difficult to apply from BLS data. Those who choose formal day care pay large sums, relative to income. But many choose informal mechanisms, such as family or neighbors.

Third, detailed studies of the financial behavior of consumers in this income range who use small-dollar loan products suggest a wide variety of financial stability and frugality¹³. While some consumers may be "borrowing from Peter to pay Paul" as regulators suggest, others manage to pay bills on time and live very frugally. Mean expense values mask frugal behavior of some consumers.

Regardless of the mechanisms behind the high failure rate of CFPB's suggested proxy-expense underwriting, it simply produces too high and too uniform a failure rate to demonstrate the underlying premise – that lenders use higher rates to profit from unaffordability.

We therefore turned to a much more granular analysis to test CFPB's theory.

12. Based on the difference between the sum of BLS mean expense values by category and mean income for the relevant income ranges.

13. <http://www.mdrc.org/publication/online-payday-and-installment-loans-0>

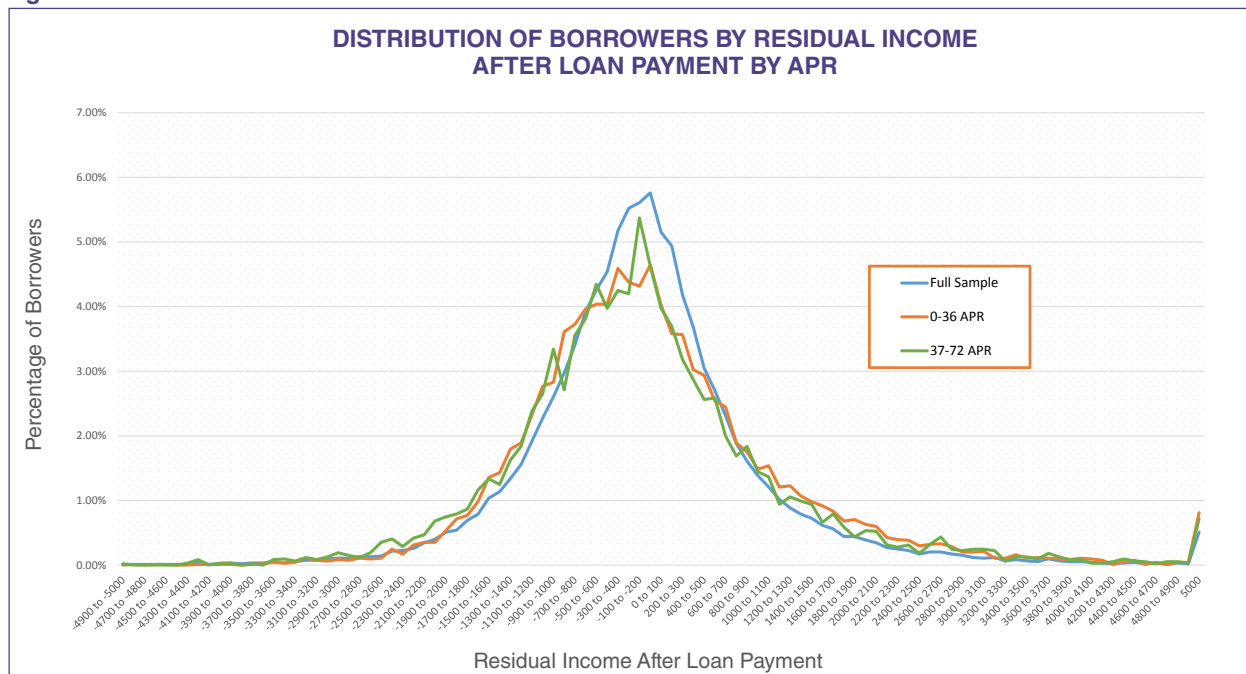
WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

Step Two: APR versus ATR At a Granular Level

Having seen that ATR failure rates (negative cash flows) are very steady as APRs rise, we decided to test whether our binary approach (pass/fail) was masking distinctions in the extent of negative cash flow. Thus, we computed the size of the negative cash flow by APR. In order to make the results comprehensible, we increased the size of the APR buckets to 36% (an arbitrary number), starting at 0-36%.

The results are shown in **Appendix B, Tables 5A and 5B**. These tables are very busy and we recommend readers use them only for verification. Instead, we have set out for comparison the curves graphing the percentage of borrowers by dollar value of residual income for various rate ranges. In Figure 2, we compare the results for 0-36% APR loans to 37-72% APR loans. We also graph the values for the entire sample.

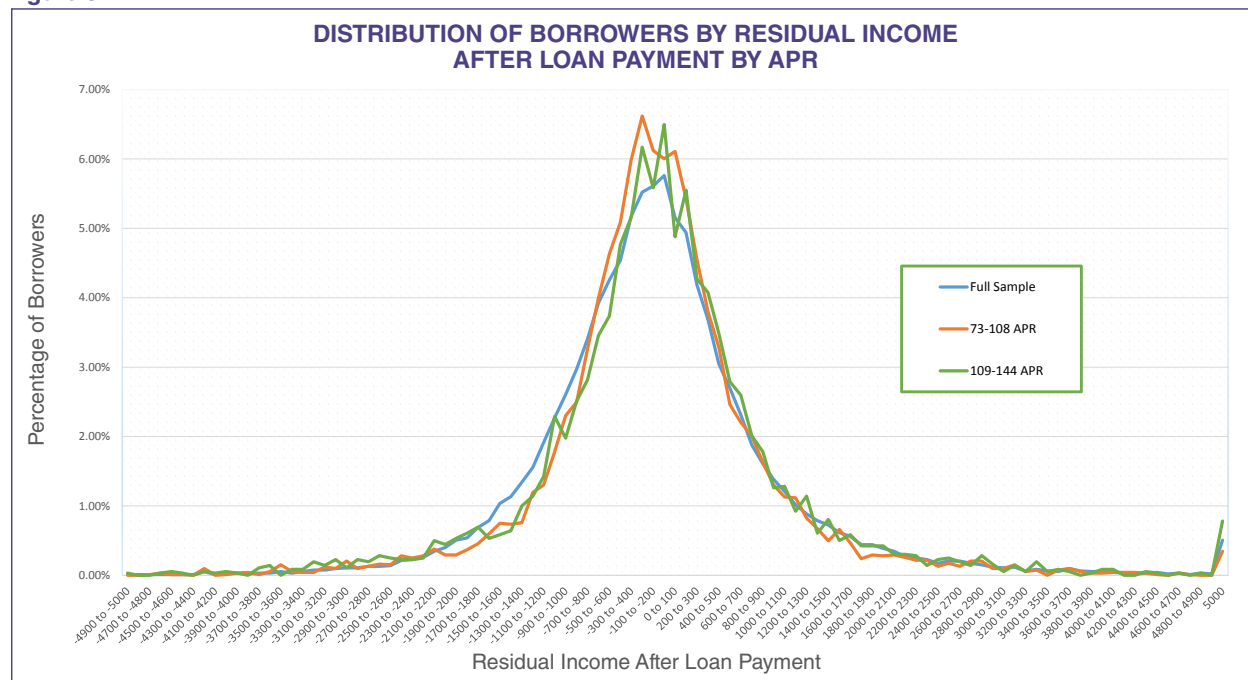
figure 2



If lenders at the higher rate range were making more unaffordable loans, the green line would peak to the left, or be thicker to the left, of the red line. That is not the case. Observe also that the graph of the full sample is almost the same as the two selected rate ranges.

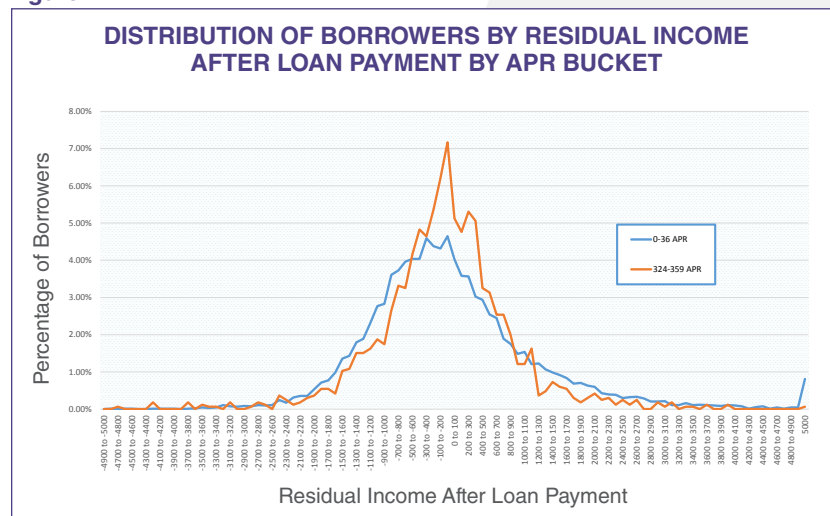
We see the same similarity in distribution when we compare 72-107% APR to 108-143% APR in **Figure 3**.

figure 3



Finally, we see the same similarity in distribution when we compare APRs that are an order of magnitude different: 0-36% versus 324-359% APR in **Figure 4**. The notable distinction between the curves is that higher rate loans tend to cluster closer to zero dollars left over, where low rate loans are more widely distributed, positive and negative.

figure 4



WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

The distributions of dollar value of residual income by APR buckets are all relatively normal (meaning bell shaped), so it is also useful to compute means and medians by APR bucket, which are set forth in **Table 1**.

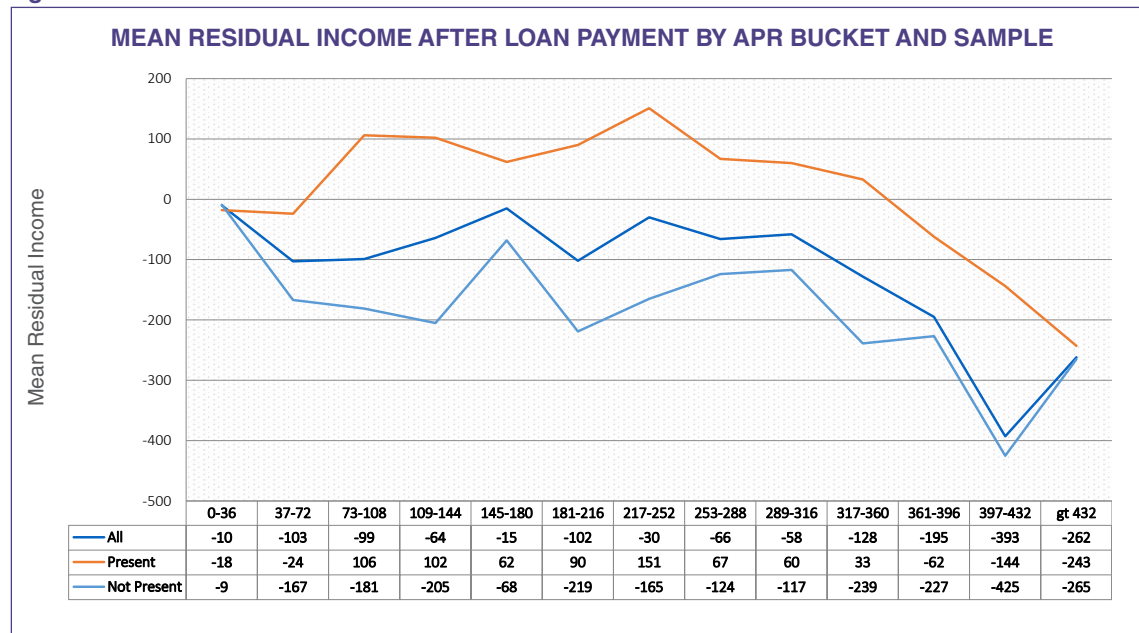
table 1

MEAN AND MEDIAN RESIDUAL INCOME AFTER LOAN PAYMENT BY APR BUCKET AND SAMPLE						
	ALL		PRESENT		NOT PRESENT	
APR BUCKET	MEAN	MEDIAN	MEAN-P	MEDIAN-P	MEAN-NP	MEDIAN-NP
0-36	-10	-147	-18	-51	-9	-155
37-72	-103	-223	-24	-112	-167	-263
73-108	-99	-129	106	25	-181	-204
109-144	-64	-92	102	25	-205	-247
145-180	-15	-92	62	-44	-68	-140
181-216	-102	-105	90	42	-219	-274
217-252	-30	-68	151	36	-165	-199
253-288	-66	-97	67	-11	-124	-168
289-316	-58	-49	60	-16	-117	-83
317-360	-128	-92	33	-38	-239	-159
361-396	-195	-185	-62	-74	-227	-216
397-432	-393	-399	-144	-149	-425	-452
gt 432	-262	-232	-243	-303	-265	-221

Mean and median values once again demonstrate that there is no trend to lower residual incomes as loans increase in APR until rates reach about 360% APR. Nor is there a meaningful inflection point at 36% APR. That is, consumers borrowing at rates below 36% may have worse net residual incomes than consumers in many of the higher brackets. We do observe that once rates approach 360% APR, in the consumer present loans, and 300% in the not present loans, there is a trend toward lower (more negative) residual incomes.

Figure 5 presents the same information graphically.

figure 5



Note that the consumer present loans, while starting out in the 0-72% range with small negative values for mean residual income, actually go positive by about \$100 a month until rates reach 317%. As noted above, some of these may not be covered loans because a minority of the storefront lenders in our dataset do not require bank account access. We do not have data on the frequency of automatic payment arrangements that would trigger covered loan status where it is not required.

Looking at average values of negative residual income for all loans, we observe that a deep negative trend does not begin until 307-360% APR, with the value in 289-316% APR being -\$58, an amount that is well within the range of behavioral frugality. One could argue that a data-driven cutoff for high priced loans that should have increased scrutiny would be on the order of 300% APR.



Conclusions

Part One

We began this part with the question: Using CFPB ATR measurements for each borrower, do lenders charging higher rates tend to make a larger percentage of loans to consumers who cannot afford the payments (the core CFPB thesis for using a rate-based coverage trigger)?

In this dataset, the answer is “No, at least not until lenders are assessing rates an order of magnitude higher than the proposed 36% APR trigger.”

Indeed, at the mean, consumer present (storefront) installment lenders in the 72% - 360% APR range appear to be meeting the very stringent CFPB requirements, while lenders below 72% are not (by a small-dollar amount). Overall, there does not appear to be a justification for the 36% trigger, and there appears to be more of an inflection point in the 300% range.

We also learn from this analysis that the CFPB ATR test, at least in its automated proxy form, is likely to reject a majority of today's installment loan consumers, and lenders will need to perform expensive and time consuming manual backup underwriting to formulate household budgets based on actual instead of proxy expenses, in order to increase the approval rate for the 60% who flunk the proxy test. Because requiring manual underwriting for 60% of borrowers will inevitably have a significant impact on credit access, the CFPB might consider the significance of the data on mean negative ability to repay. Mean residual incomes generally stay within \$200 of breaking even, until rates exceed 300%, and that might well be a more prudent place to start regulation.

Part Two: Relationship of APR and Loan Performance

If, as the CFPB posits, lenders are incented to make unaffordable loans by higher yields that cover higher default losses, then we should observe a correlation between increasing interest rates and increasing rates of poor loan performance. As noted above, that correlation may be muted temporarily by payment prioritization obtained by a leveraged payment mechanism. Over a long enough period of observation, however, other creditors or necessary expenses will exert their influence. Further, because the leveraged payment mechanism is present in the vast majority of loans in our dataset, its influence should not change the effect of underlying disparities in underwriting that correlate with interest rate.

Thus, we ask the question: In this dataset, do higher rates correlate with higher rates of loan distress? Amongst all borrowers? Amongst borrowers with negative residual incomes?

300

OVERALL, THERE DOES NOT APPEAR TO BE A JUSTIFICATION FOR THE 36% TRIGGER, AND THERE APPEARS TO BE MORE OF AN INFLECTION POINT IN THE 300% RANGE

36%

IF LENDERS ARE INCENTED TO MAKE UNAFFORDABLE LOANS BY HIGHER YIELDS THAT COVER HIGHER DEFAULT LOSSES, THEN WE SHOULD OBSERVE A CORRELATION BETWEEN INCREASING INTEREST RATES AND INCREASING RATES OF POOR LOAN PERFORMANCE.

For this analysis, we created a subset of the “Full Data Sample” for which we had enough performance data to avoid truncation effect. We lost relatively few loans when we screened out any loan that did not provide either: (a) the full scheduled period of loan performance, or (b) at least six months from origination date to end of sample range.

As with ATR, we grouped loans by 10% buckets of APR (0-9%, 10-19% etc.) and then tabulated the percentage of borrowers in financial distress in each bucket. We used two definitions of financial distress. In the first, we counted all borrowers who at any time were more than 60 days past due, without duplicating the count if a borrower was in that condition more than once. In the second, we counted all borrowers whose loan record was marked either default or charge off (again, without duplication).

Our tabulations of financial distress by APR are shown in **Appendix C, Tables 1-4**. Our results are presented graphically in **Figures 6-9**. **Figure 6** graphs the percentage of all borrowers in each APR bucket who were 60+ days past due (DPD). **Figure 7** shows the percentage of all borrowers who ended up in charge off or default.

400%

**400% IS THE INFLECTION POINT
WHERE RATE DRIVES INCREASES
IN 60 DPD**

figure 6

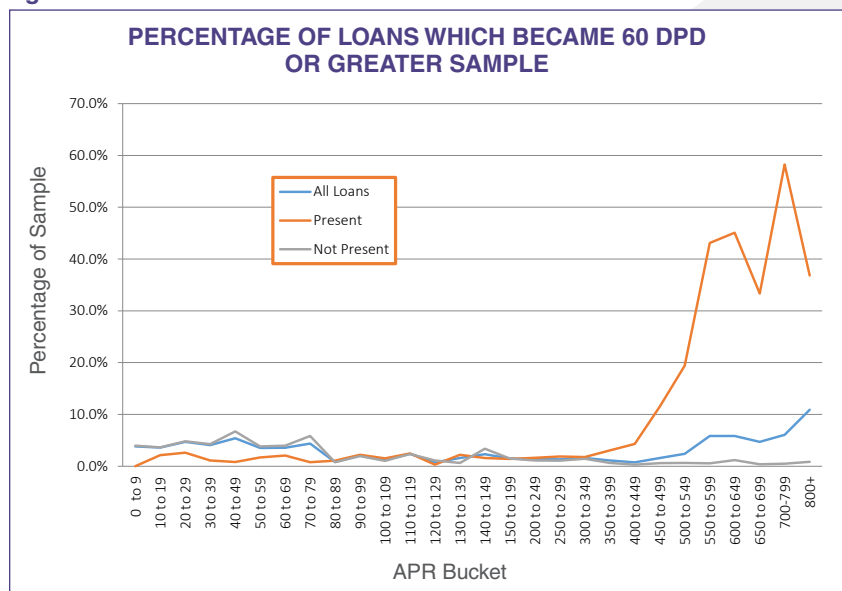
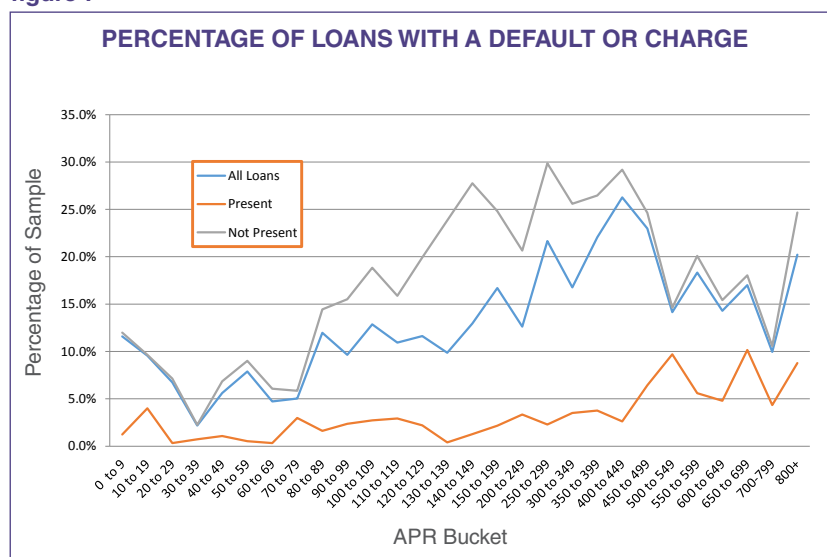


Figure 6 shows no correlation between interest rate and 60 DPD at the 36% range or even the 360% range, but there is definitely an inflection around 400% APR for consumer present loans. Note however, that the counts of consumer present loans at those very high rates are quite small, although still statistically significant.

WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

Figure 7 shows a slightly different picture. The 36% level is not an inflection point for increased defaults and charge offs. Indeed, for all loan originations, defaults and charge offs decline after 9% APR and do not return to the same level until 80% APR. At that point, defaults for not present loans begin a staggered climb that peaks at 299% APR, at 30% of loans defaulting. The default rate then falls for the rest of the sample. Notably, consumer present loans remain at low default rates until the APR range of 450-499%, when they climb to 6.4% and then begin a staggered climb to 10%.

figure 7



Figures 8 and 9 add values for the percentage of loans made to borrowers with negative residual incomes (i.e., those that “flunk” the ATR test) that show financial distress, by APR. The figures compare delinquency and default rates for consumers with negative ATR against the previously graphed rates for consumers generally. Surprisingly, the rate of distress is not correlated with negative ATR. In many APR buckets, fewer insolvent consumers are in distress than consumers in that APR bucket overall. Overall, the rate of distress for consumers with negative ATR generally tracks the rate of distress for consumers overall.

80-89%

THE POINT AT WHICH ONLINE LOAN RATES BEGIN TO CORRELATE WITH INCREASES IN DEFAULT.

14. This finding is consistent with our [Report #10](#), which found a similar lack of predictive value in ATR for payday lending.

figure 8

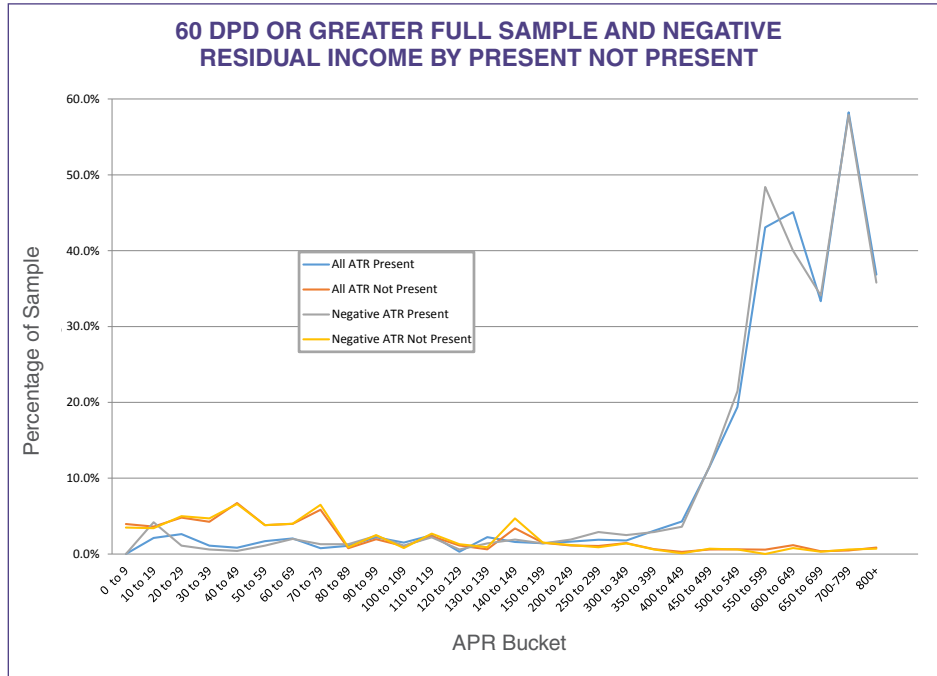
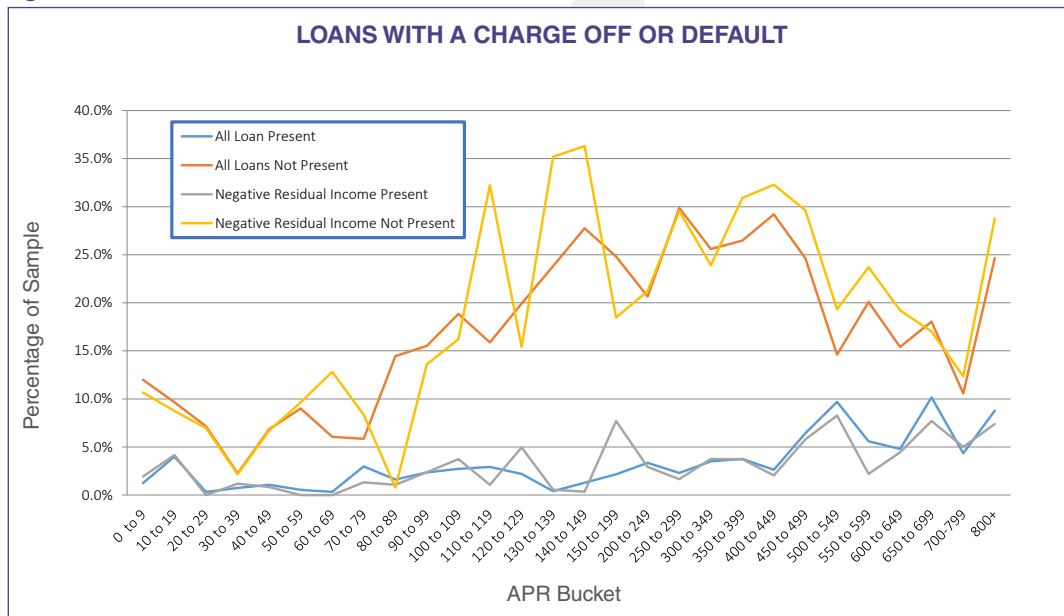


figure 9





WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?



Conclusions - Part Two

The loans in this dataset do not support a finding that levels of financial distress correlate with levels of interest charged on a loan in a linear fashion. The 36% level is actually a point where default rates are declining as rates increase. We do find that online loans tend to have an uptick in default rate at around 80% APR, which continues until 299% APR and then declines. Storefront loans appear to have low default rates that do not begin increasing until 450% APR. The existence of negative CFPB ATR also does not correlate with an increase in the likelihood of loan distress. That is counterintuitive, but lender behavior may be driven by entirely different algorithms, and consumers may make choices based on factors other than a static determination of positive cash flow.

36%

THE 36% NUMBER BEARS NO RELATIONSHIP TO THE THEORIES OF HARM THAT ARE ARTICULATED IN THE NPRM.



Overall Conclusions and Observations

The 36% trigger for covered loan status is unarguably an arbitrary choice, based solely on a legislative determination in another context. CFPB has not argued that it found evidence in the Congressional Record in the form of data finding that 36% is an inflection point for greater harm than 35%. The logic of using a rate trigger is a policy choice – to avoid burdening conventional bank loans with a severe additional underwriting challenge while providing broad enough coverage to permanently fence in current and as-yet-unknown future sources of harmful lending.

This paper suggests that, in the context of unsecured (other than by bank account access) installment lending, the 36% number truly is arbitrary. It bears no relationship to the theories of harm that are articulated in the NPRM. This paper shows some evidence for a choice in the 300% APR range, but the authors would prefer additional information from an even larger dataset that encompasses more lenders before making such a recommendation.

CFPB has announced that it will begin the process of rulemaking to allow examination of installment lenders some time before 2017, by proposing rules defining larger participants in the market that will be subject to examination. That process will expose the Bureau to significantly greater insight into the business, and will provide the Bureau with better data to define market behaviors that truly do evidence the harms described in the NPRM. Perhaps CFPB should defer defining its fence until it has the data to support the choice of wire.

7 Appendix A to nonPrime101 Report #11

"Complete Sample" Descriptive Statistics

Table 1: (i) Count of Loans by Loan Size and APR - PRESENT

Total=93,545

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	160	226	3,959	2,465
36.01% - 150%	3,838	7,336	314	1
150.01% - 400%	48,952	16,393	980	1
≥ 400.01%	4,918	3,753	221	NO COUNT

Table 1: (ii) Count of Loans by Loan Size and APR - NOT PRESENT

Total=741,814

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	7,895	36,151	78,191	137,538
36.01% - 150%	11,342	39,074	45,949	14,505
150.01% - 400%	114,747	104,802	83,055	2,671
≥ 400.01%	186,814	112,575	47,647	723

Table 2: (i) Mean Income by Loan size and APR - PRESENT

Total=93,545

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	2,237	2,789	3,357	3,684
36.01% - 150%	1,934	2,436	3,098	N/A
150.01% - 400%	2,122	2,438	3,907	N/A
≥ 400.01%	2,166	2,300	3,663	N/A

Table 2: (ii) Mean Income by Loan size and APR - NOT PRESENT

Total=1,023,679

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	2,491	2,927	3,161	3,838
36.01% - 150%	2,788	2,932	3,488	4,150
150.01% - 400%	2,595	3,131	3,674	4,528
≥ 400.01%	2,668	3,117	3,380	3,489

Table 3: (i) Mean APR by Loan Size and APR - PRESENT

Total=93,545

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	19	26	30	27
36.01% - 150%	107	106	105	N/A
150.01% - 400%	212	263	299	N/A
≥ 400.01%	619	601	623	N/A

Table 3: (ii) Count of Loans by Loan Size and APR - NOT PRESENT **Total=1,023,679**

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	18	21	30	30
36.01% - 150%	108	88	88	73
150.01% - 400%	289	304	260	239
≥ 400.01%	721	644	504	565

Table 4: (i) Mean Scheduled Loan Payment by Loan Size and APR - PRESENT **Total=93,545**

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	321	221	138	230
36.01% - 150%	152	272	220	N/A
150.01% - 400%	243	226	488	N/A
≥ 400.01%	291	399	833	N/A

Table 4: (ii) Mean Scheduled Loan Payment by Loan Size and APR - NOT PRESENT **Total=1,023,679**

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	95	164	172	406
36.01% - 150%	270	206	311	439
150.01% - 400%	319	506	408	1,418
≥ 400.01%	289	462	524	3,817

Table 5: Distribution by State

STATE	PRESENT		NOT PRESENT	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
AK	4	0	1,190	0.12
AL	36,201	38.69	25,115	2.45
AR	5	0.01	3,642	0.36
AZ	1,947	2.08	15,499	1.51
CA	732	0.78	165,665	16.18
CO	12,499	13.36	8,230	0.8
CT	5	0.01	4,404	0.43
DC	1	0	1,957	0.19
DE	11	0.01	7,015	0.69
FL	1,626	1.74	66,623	6.51
GA	1,946	2.08	32,447	3.17
HI	4	0	2,320	0.23
IA	35	0.04	2,029	0.2
ID	3,341	3.57	5,601	0.55
IL	137	0.15	25,573	2.5
IN	100	0.11	17,948	1.75
KS	32	0.03	8,603	0.84
KY	20	0.02	7,539	0.74
LA	10	0.01	10,468	1.02
MA	6	0.01	9,691	0.95
MD	173	0.18	7,009	0.68
ME	190	0.2	1,225	0.12
MI	135	0.14	43,974	4.3
MN	9	0.01	5,958	0.58
MO	127	0.14	30,310	2.96
MS	124	0.13	6,445	0.63
MT	17	0.02	808	0.08
NC	849	0.91	12,289	1.2
ND	7	0.01	2,539	0.25
NE	7	0.01	3,891	0.38
NH	202	0.22	1,634	0.16
NJ	291	0.31	21,480	2.1
NM	85	0.09	9,876	0.96
NV	16,741	17.89	12,474	1.22
NY	20	0.02	1,488	0.15
OH	12	0.01	93,029	9.09
OK	50	0.05	10,960	1.07
OR	262	0.28	6,455	0.63
PA	34	0.04	9,756	0.95
RI	1	0	2,113	0.21
SC	13,879	14.83	20,954	2.05
SD	3	0	4,340	0.42
TN	50	0.05	14,106	1.38
TX	57	0.06	209,370	20.45
UT	28	0.03	9,256	0.9
VA	680	0.73	24,145	2.36
VT	1	0	250	0.02
WA	656	0.7	9,496	0.93
WI	131	0.14	25,298	2.47
WV	67	0.07	3	0
WY	12	0.01	1,183	0.12

FPB's Hypothesis
res Increase?



Appendix A-I to nonPrimeIOI Report #II

“Full Performance Sample” Descriptive Statistics

Table 1: (i) Count of Loans by Loan Size and APR - PRESENT

Total=15,093

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	120	479	5	N/A
36.01% - 150%	1,159	4119	100	N/A
150.01% - 400%	2,108	4,644	245	N/A
≥ 400.01%	338	1,044	49	N/A

Table 1: (ii) Count of Loans by Loan Size and APR - NOT PRESENT

Total=54,230

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	462	4,644	5,523	3,370
36.01% - 150%	594	4,337	4,433	2,642
150.01% - 400%	1,285	5,860	5,705	195
≥ 400.01%	1,884	5,290	3,568	73

Table 1: (iii) Count of Loans by a More Granular APR Bucket

APR_BUCKET	PRESENT	NOT PRESENT
Apr_10	81	2109
Apr_20	50	2994
Apr_30	307	4812
Apr_40	273	4730
Apr_50	373	1388
Apr_60	188	1244
Apr_70	299	990
Apr_80	269	684
Apr_90	806	3028
Apr_100	550	683
Apr_110	734	1242
Apr_120	377	611
Apr_130	680	773
Apr_140	501	340
Apr_150	471	371
Apr_200	1947	3481
Apr_250	2179	2518
Apr_300	1219	2877
Apr_350	1083	1625
Apr_400	612	2543
Apr_450	305	2456
Apr_500	171	1701
Apr_550	165	1608
Apr_600	125	901
Apr_650	125	1064
Apr_700	128	848
Apr_800	184	1713
Apr_gt800	228	588
no_measure	663	4308

WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

Table 2: (i) Mean Income by Loan Size and APR - PRESENT

Total=15,036

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	\$2,670	\$1,954	\$2,682	N/A
36.01% - 150%	\$2,460	\$2,367	\$3,616	N/A
150.01% - 400%	\$2,555	\$2,495	\$4,990	N/A
≥ 400.01%	\$1,979	\$2,333	\$3,893	N/A

Table 2: (ii) Mean Income by Loan Size and APR - NOT PRESENT

Total=53,878

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	\$2,371	\$3,030	\$3,041	\$3,441
36.01% - 150%	\$2,552	\$2,953	\$3,516	\$4,525
150.01% - 400%	\$2,574	\$2,914	\$3,546	\$3,654
≥ 400.01%	\$2,595	\$3,061	\$3,299	\$3,666

Table 3: (i) Mean APR by Loan Size and APR - PRESENT

Total=15,036

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	16	27	27	N/A
36.01% - 150%	101	99	103	N/A
150.01% - 400%	237	247	267	N/A
≥ 400.01%	611	606	632	N/A

Table 3: (ii) Mean APR by Loan Size and APR - NOT PRESENT

Total=53,878

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	18	20	27	19
36.01% - 150%	86	91	86	63
150.01% - 400%	287	270	255	267
≥ 400.01%	615	612	497	575

Table 4: (i) Mean Scheduled Loan Payment by Loan Size and APR – PRESENT Total=14,375

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	\$56	\$108	\$154	N/A
36.01% - 150%	\$50	\$114	\$220	N/A
150.01% - 400%	\$44	\$181	\$531	N/A
≥ 400.01%	\$189	\$418	\$653	N/A

Table 4: (ii) Mean Scheduled Loan Payment by Loan Size and APR – NOT PRESENT Total=49,506

APR/Amount	≤\$500	\$501-1500	\$1501-5000	≥\$5001
≤ 36%	\$70	\$165	\$166	\$315
36.01% - 150%	\$78	\$202	\$320	\$578
150.01% - 400%	\$88	\$211	\$454	\$2,175
≥ 400.01%	\$90	\$263	\$589	\$3,968

Table 5: (Distribution by State

STATE	PRESENT		NOT PRESENT	
	FREQUENCY	PERCENT	FREQUENCY NP	PERCENT NP
AK	1	0.01	66	0.12
AL	1,788	11.85	1,613	2.97
AR			208	0.38
AZ	20	0.13	709	1.31
CA	143	0.95	8,636	15.92
CO	2,678	17.74	348	0.64
CT			188	0.35
DC	1	0.01	37	0.07
DE	1	0.01	383	0.71
FL	18	0.12	3,223	5.94
GA	278	1.84	1,770	3.26
HI	3	0.02	103	0.19
IA	1	0.01	87	0.16
ID	548	3.63	357	0.66
IL	5	0.03	1,927	3.55
IN	3	0.02	914	1.69
KS	1	0.01	284	0.52
KY	1	0.01	388	0.72
LA	4	0.03	779	1.44
MA	2	0.01	373	0.69
MD	2	0.01	325	0.6
ME	1	0.01	21	0.04
MI	8	0.05	971	1.79
MN	4	0.03	285	0.53
MO	7	0.05	1,754	3.23
MS	6	0.04	286	0.53
MT	1	0.01	57	0.11
NC	130	0.86	858	1.58
ND	2	0.01	99	0.18
NE	3	0.02	228	0.42
NH	1	0.01	70	0.13
NJ			930	1.71
NM	8	0.05	630	1.16
NV	3,159	20.93	689	1.27
NY	1	0.01	117	0.22
OH	30	0.2	5,459	10.07
OK	7	0.05	361	0.67
OR	21	0.14	296	0.55
PA	4	0.03	249	0.46
RI			114	0.21
SC	6,052	40.1	1,637	3.02
SD	1	0.01	253	0.47
TN	5	0.03	939	1.73
TX	54	0.36	11,674	21.53
UT	5	0.03	557	1.03
VA	2	0.01	998	1.84
VT			5	0.01
WA	71	0.47	450	0.83
WI	10	0.07	1,489	2.75
WV	2	0.01	36	0.07
WY	12	0.01	1,183	0.12

7 Appendix B: Tables Relating to Part I

Table 1: Percentage of Borrowers by Residual Income *Before* Loan Payment

RESIDUAL INCOME BEFORE LOAN PAYMENT			
RESIDUAL INCOME	ALL	PRESENT	NON-PRESENT
N	64,193	13,628	50,565
-4500 to -5000	0.0%	0.0%	0.1%
-4000 to -4500	0.0%	0.0%	0.1%
-3500 to -4000	0.1%	0.0%	0.1%
-3000 to -3500	0.1%	0.1%	0.2%
-2500 to -3000	0.4%	0.1%	0.4%
-2000 to -2500	0.7%	0.3%	0.8%
-1500 to -2000	1.9%	0.7%	2.2%
-1000 to -1500	4.9%	2.8%	5.5%
-900 to -1000	1.7%	1.2%	1.8%
-800 to -900	2.1%	1.7%	2.2%
-700 to -800	2.4%	1.9%	2.5%
-600 to -700	2.9%	2.4%	3.0%
-500 to -600	3.5%	3.2%	3.5%
-400 to -500	4.0%	4.1%	3.9%
-300 to -400	4.5%	4.7%	4.5%
-200 to -300	5.0%	5.4%	4.9%
-100 to -200	5.7%	6.4%	5.5%
zero to -100	6.0%	7.2%	5.7%
zero to 100	6.2%	7.5%	5.8%
100 to 200	6.0%	7.3%	5.6%
200 to 300	5.3%	6.3%	5.1%
300 to 400	4.7%	5.3%	4.6%
400 to 500	4.1%	4.7%	3.9%
500 to 600	3.5%	3.9%	3.3%
600 to 700	3.2%	3.3%	3.1%
700 to 800	2.6%	2.9%	2.6%
800 to 900	2.3%	2.3%	2.2%
900 to 1000	1.9%	2.0%	1.9%
1000 to 1500	6.3%	5.8%	6.4%
1500 to 2000	3.3%	2.7%	3.5%
2000 to 2500	1.8%	1.3%	1.9%
2500 to 3000	1.0%	0.8%	1.1%
3000 to 3500	0.7%	0.5%	0.7%
3500 to 4000	0.4%	0.3%	0.4%
4000 to 4500	0.2%	0.1%	0.2%
4500 to 5000	0.2%	0.1%	0.2%
gt5000	0.6%	0.3%	0.7%

Table 2: Percentage of Borrowers by Residual Income After Loan Payment

RESIDUAL INCOME	ALL	PRESENT	NON-PRESENT
N	64,147	13,626	49,521
-4500 to -5000	0.1%	0.0%	0.1%
-4000 to -4500	0.1%	0.0%	0.1%
-3500 to -4000	0.2%	0.0%	0.2%
-3000 to -3500	0.3%	0.1%	0.4%
-2500 to -3000	0.6%	0.3%	0.7%
-2000 to -2500	1.4%	0.4%	1.8%
-1500 to -2000	3.6%	1.3%	4.3%
-1000 to -1500	8.2%	4.6%	9.4%
-900 to -1000	2.6%	1.8%	2.9%
-800 to -900	3.0%	2.3%	3.2%
-700 to -800	3.4%	2.7%	3.7%
-600 to -700	3.9%	3.6%	4.1%
-500 to -600	4.3%	4.0%	4.4%
-400 to -500	4.5%	4.5%	4.7%
-300 to -400	5.2%	5.5%	5.2%
-200 to -300	5.5%	6.3%	5.4%
-100 to -200	5.6%	7.0%	5.3%
zero to -100	5.8%	7.5%	5.4%
zero to 100	5.2%	6.8%	4.8%
100 to 200	4.9%	6.0%	4.7%
200 to 300	4.2%	5.7%	3.9%
300 to 400	3.7%	4.5%	3.5%
400 to 500	3.1%	3.8%	2.9%
500 to 600	2.7%	3.2%	2.6%
600 to 700	2.3%	2.7%	0.2%
700 to 800	1.9%	2.2%	1.8%
800 to 900	1.6%	1.8%	1.6%
900 to 1000	1.4%	1.5%	1.4%
1000 to 1500	4.6%	4.7%	4.7%
1500 to 2000	2.5%	2.1%	2.6%
2000 to 2500	1.3%	1.0%	1.4%
2500 to 3000	0.9%	0.6%	0.9%
3000 to 3500	0.5%	0.4%	0.5%
3500 to 4000	0.3%	0.3%	0.3%
4000 to 4500	0.2%	0.1%	0.2%
4500 to 5000	0.1%	0.1%	0.1%
gt5000	0.5%	0.3%	0.6%

WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

Table 3: Percentage of Loans with Negative Residual Income Before Loan Payment by APR Bucket

APR Buckets	% of Loans with Negative Residual Income Before Loan Payment to All Loans in APR Bucket	% of Present Loans with Negative Residual Income Before Loan Payment to All Present Loans in APR Bucket	% of Not Present Loans with Negative Residual Income Before Loan Payment to All Not Present Loans in APR Bucket
0 to 9	51.5%	51.9%	51.5%
10 to 19	49.7%	38.0%	49.9%
20 to 29	53.4%	53.4%	53.4%
30 to 39	52.0%	52.4%	51.9%
40 to 49	55.0%	58.4%	54.0%
50 to 59	53.2%	42.0%	54.9%
60 to 69	52.0%	57.9%	50.2%
70 to 79	50.5%	52.0%	49.9%
80 to 89	48.6%	50.6%	48.1%
90 to 99	51.5%	49.5%	53.1%
100 to 109	48.7%	46.5%	50.1%
110 to 119	47.7%	41.9%	51.2%
120 to 129	49.9%	44.9%	54.3%
130 to 139	49.0%	48.5%	49.7%
140 to 149	48.6%	47.6%	49.9%
150 to 199	49.1%	47.8%	49.8%
200 to 249	49.0%	47.4%	50.4%
250 to 299	46.1%	42.6%	47.6%
300 to 349	46.9%	44.0%	48.8%
350 to 399	48.0%	45.1%	48.7%
400 to 449	56.4%	50.2%	57.2%
450 to 499	53.6%	52.6%	53.7%
500 to 549	46.4%	50.9%	46.0%
550 to 599	48.2%	56.8%	47.1%
600 to 649	43.6%	51.2%	42.7%
650 to 699	52.7%	53.9%	52.5%
700-799	48.0%	57.6%	46.9%
800+	51.5%	58.3%	48.8%

Table 4: Percentage of Loans with Negative Residual Income After Loan Payment by APR Bucket

APR Buckets	% of All Loans with Negative Residual Income to All Loans in APR Bucket After Loan Payment	% of Present Loans with Negative Residual Income to All Present Loans in APR Bucket After Loan Payment	% of Not Present Loans with Negative Residual Income to All Not Present Loans in APR Bucket After Loan Payment
0 to 9	60.2%	64.2%	60.0%
10 to 19	58.5%	48.0%	58.7%
20 to 29	60.4%	58.3%	60.6%
30 to 39	58.7%	61.5%	58.5%
40 to 49	66.2%	64.3%	66.6%
50 to 59	64.9%	48.4%	67.4%
60 to 69	64.3%	65.9%	63.8%
70 to 79	59.8%	56.5%	61.1%
80 to 89	63.2%	57.7%	64.7%
90 to 99	59.6%	53.5%	64.6%
100 to 109	58.8%	51.1%	63.4%
110 to 119	56.5%	48.0%	61.7%
120 to 129	60.8%	51.9%	68.6%
130 to 139	61.1%	58.7%	64.7%
140 to 149	56.3%	55.2%	57.7%
150 to 199	59.2%	55.4%	61.3%
200 to 249	58.0%	53.4%	61.9%
250 to 299	57.4%	54.4%	58.7%
300 to 349	59.0%	56.3%	60.7%
350 to 399	64.2%	57.2%	65.9%
400 to 449	75.0%	63.9%	76.4%
450 to 499	71.9%	70.8%	72.0%
500 to 549	63.4%	73.3%	62.4%
550 to 599	65.2%	72.8%	64.2%
600 to 649	63.2%	72.0%	62.1%
650 to 699	69.6%	71.1%	69.3%
700-799	64.0%	76.1%	62.8%
800+	74.4%	77.2%	73.3%
All APRs	61.76%	56.93%	63.16%

WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

Table 5A: Residual Income After Loan Payment by APR Bucket

APR BUCKET	0-36	37-72	73-108	109-144	145-180	181-216
-4500 to -5000	0.03%	0.00%	0.05%	0.11%	0.18%	0.15%
-4000 to -4500	0.04%	0.16%	0.13%	0.17%	0.26%	0.15%
-3500 to -4000	0.09%	0.20%	0.26%	0.28%	0.24%	0.24%
-3000 to -3500	0.29%	0.60%	0.37%	0.74%	0.42%	0.42%
-2500 to -3000	0.47%	1.17%	0.72%	1.04%	0.98%	0.91%
-2000 to -2500	1.47%	2.43%	1.40%	1.72%	2.03%	1.82%
-1500 to -2000	4.26%	5.32%	2.43%	2.97%	3.49%	4.15%
-1000 to -1500	10.04%	10.10%	5.83%	6.50%	7.43%	7.86%
-900 to -1000	2.87%	3.39%	2.30%	2.00%	2.46%	2.45%
-800 to -900	3.59%	2.62%	2.47%	2.51%	2.27%	2.40%
-700 to -800	3.65%	3.75%	3.27%	2.77%	2.81%	2.82%
-600 to -700	3.99%	3.75%	3.99%	3.48%	3.68%	3.61%
-500 to -600	4.11%	4.30%	4.61%	3.78%	3.31%	3.76%
-400 to -500	3.97%	4.18%	5.12%	4.74%	4.36%	3.86%
-300 to -400	4.55%	4.42%	6.01%	5.11%	4.12%	5.28%
-200 to -300	4.28%	4.50%	6.74%	5.94%	6.03%	4.73%
-100 to -200	4.38%	5.54%	6.09%	5.53%	5.38%	5.18%
zero to -100	4.52%	4.97%	6.08%	6.38%	5.21%	5.77%
zero to 100	3.99%	4.18%	6.08%	5.02%	5.93%	5.30%
100 to 200	3.63%	3.56%	5.55%	5.43%	4.77%	5.65%
200 to 300	3.53%	3.29%	4.50%	4.29%	3.55%	4.82%
300 to 400	3.12%	2.62%	3.83%	4.07%	3.55%	3.76%
400 to 500	2.95%	2.50%	3.32%	3.50%	3.07%	3.13%
500 to 600	2.51%	2.74%	2.48%	2.74%	2.92%	2.97%
600 to 700	2.47%	1.90%	2.18%	2.69%	1.98%	2.64%
700 to 800	1.99%	1.44%	2.02%	1.95%	2.09%	1.85%
800 to 900	1.81%	1.76%	1.59%	1.78%	1.37%	1.49%
900 to 1000	1.54%	1.32%	1.30%	1.30%	1.51%	1.58%
1000 to 1500	6.14%	4.79%	4.24%	4.97%	6.12%	4.64%
1500 to 2000	3.85%	2.79%	1.88%	2.42%	2.96%	2.92%
2000 to 2500	2.07%	1.61%	1.08%	1.30%	1.48%	1.25%
2500 to 3000	1.38%	1.47%	0.80%	1.04%	1.24%	0.70%
3000 to 3500	0.68%	0.81%	0.39%	0.51%	0.72%	0.57%
3500 to 4000	0.53%	0.51%	0.30%	0.23%	0.61%	0.33%
4000 to 4500	0.31%	0.29%	0.16%	0.17%	0.35%	0.28%
4500 to 5000	0.15%	0.24%	0.04%	0.05%	0.21%	0.06%
gt5000	0.78%	0.84%	0.35%	0.74%	0.90%	0.52%

Table 5B: Residual Income After Loan Payment by APR Bucket

APR BUCKET	217-252	253-288	289-316	317-360	361-396	397-432	gt 432
-4500 to -5000	0.00%	0.06%	0.04%	0.06%	0.08%	0.10%	0.09%
-4000 to -4500	0.18%	0.11%	0.04%	0.18%	0.08%	0.14%	0.14%
-3500 to -4000	0.29%	0.11%	0.47%	0.31%	0.14%	0.42%	0.09%
-3000 to -3500	0.18%	0.34%	0.33%	0.36%	0.22%	0.24%	0.27%
-2500 to -3000	0.78%	0.51%	0.57%	0.31%	0.44%	0.24%	0.48%
-2000 to -2500	1.67%	1.39%	1.33%	1.30%	1.43%	1.17%	0.92%
-1500 to -2000	3.81%	4.22%	3.35%	2.89%	3.35%	5.22%	2.96%
-1000 to -1500	7.51%	8.54%	7.41%	7.44%	10.40%	13.69%	7.79%
-900 to -1000	2.35%	2.14%	2.36%	1.79%	3.53%	4.24%	2.74%
-800 to -900	2.31%	2.28%	2.12%	2.83%	3.84%	4.89%	3.62%
-700 to -800	2.60%	2.62%	2.93%	3.32%	3.30%	4.84%	4.22%
-600 to -700	3.17%	3.26%	3.16%	3.38%	4.47%	5.45%	4.72%
-500 to -600	3.45%	3.70%	3.25%	4.19%	4.82%	5.83%	5.08%
-400 to -500	3.64%	4.32%	4.10%	4.80%	4.55%	4.98%	5.57%
-300 to -400	5.09%	4.83%	4.68%	4.68%	5.36%	6.85%	6.09%
-200 to -300	5.66%	5.14%	5.95%	5.47%	5.72%	5.36%	6.20%
-100 to -200	5.23%	5.31%	5.81%	6.34%	5.72%	5.45%	6.52%
zero to -100	5.66%	5.65%	6.56%	7.01%	5.89%	4.48%	6.73%
zero to 100	5.77%	6.20%	6.51%	4.99%	5.00%	4.14%	5.54%
100 to 200	4.59%	4.90%	5.75%	4.68%	6.34%	3.92%	5.74%
200 to 300	3.88%	4.32%	5.19%	5.35%	3.84%	2.98%	4.91%
300 to 400	4.17%	4.56%	4.34%	4.99%	4.07%	2.65%	3.79%
400 to 500	3.52%	3.47%	3.11%	3.27%	2.99%	2.15%	2.81%
500 to 600	2.95%	2.92%	3.21%	3.27%	2.64%	1.91%	2.47%
600 to 700	2.85%	2.25%	3.11%	2.22%	2.19%	1.40%	2.22%
700 to 800	2.13%	2.14%	2.50%	2.58%	1.61%	1.26%	1.47%
800 to 900	2.13%	2.25%	1.47%	2.03%	0.98%	1.07%	1.14%
900 to 1000	1.81%	1.67%	1.27%	1.10%	1.29%	0.84%	1.09%
1000 to 1500	5.62%	4.56%	4.01%	4.43%	3.08%	2.37%	2.72%
1500 to 2000	3.09%	2.75%	1.89%	1.97%	1.33%	0.74%	0.95%
2000 to 2500	1.57%	1.16%	1.13%	1.35%	0.49%	0.51%	0.35%
2500 to 3000	0.82%	0.98%	0.71%	0.56%	0.40%	0.14%	0.17%
3000 to 3500	0.35%	0.44%	0.33%	0.31%	0.04%	0.10%	0.10%
3500 to 4000	0.25%	0.27%	0.33%	0.18%	0.18%	0.04%	0.05%
4000 to 4500	0.11%	0.17%	0.10%	0.00%	0.00%	0.04%	0.03%
4500 to 5000	0.18%	0.03%	0.10%	0.00%	0.04%	0.00%	0.10%
gt5000	0.64%	0.41%	0.47%	0.06%	0.14%	0.18%	0.15%

7 Appendix C: Tables Relating to Part 2

Table 1: Percentage of Samples Which Had an Occurrence of 60 DPD or Greater (Full Sample)

PERCENTAGE OF ALL LOANS WHICH BECAME 60 DPD OR GREATER TO LOANS IN THE SAMPLE DUPLICATES REMOVED			
APR Buckets	% of All Loans 60 DPD or Greater to All loans in APR Bucket	% of Present Loans 60 DPD or Greater to All Present Loans in APR Bucket	% of Not Present Loans 60 DPD or Greater to All Not Present Loans in APR Bucket
Count 60 DPD	1,662	608	1,054
0 to 9	3.8%	0.0%	4.0%
10 to 19	3.6%	2.1%	3.6%
20 to 29	4.7%	2.6%	4.8%
30 to 39	4.1%	1.1%	4.2%
40 to 49	5.4%	0.8%	6.7%
50 to 59	3.5%	1.7%	3.8%
60 to 69	3.6%	2.1%	4.0%
70 to 79	4.4%	0.8%	5.8%
80 to 89	0.8%	1.1%	0.8%
90 to 99	2.1%	2.2%	2.0%
100 to 109	1.2%	1.5%	1.0%
110 to 119	2.4%	2.5%	2.4%
120 to 129	0.7%	0.3%	1.1%
130 to 139	1.6%	2.2%	0.6%
140 to 149	2.3%	1.6%	3.4%
150 to 199	1.5%	1.4%	1.5%
200 to 249	1.4%	1.6%	1.1%
250 to 299	1.3%	1.9%	1.1%
300 to 349	1.6%	1.8%	1.4%
350 to 399	1.1%	3.1%	0.6%
400 to 449	0.7%	4.3%	0.3%
450 to 499	1.6%	11.5%	0.6%
500 to 549	2.4%	19.4%	0.6%
550 to 599	5.8%	43.1%	0.6%
600 to 649	5.8%	45.1%	1.2%
650 to 699	4.7%	33.3%	0.4%
700-799	6.1%	58.2%	0.5%
800+	10.9%	36.8%	0.9%
Overall in Sample	2.7%	4.4%	2.7%

Table 2: Percentage of Samples with Negative Residual Income After Loan Payment Which Had an Occurance of 60 DPD or Greater

PERCENTAGE OF LOANS WITH NEGATIVE RESIDUAL INCOME AFTER LOAN PAYMENT WHICH BECAME 60 DPD OR GREATER TO LOANS IN THE SAMPLES DUPLICATES REMOVED			
APR Buckets	% of All Loans 60 DPD or Greater to All loans in APR Bucket	% of Present Loans 60 DPD or Greater to All Present Loans in APR Bucket	% of Not Present Loans 60 DPD or Greater to All Not Present Loans in APR Bucket
Count 60 DPD	1,137	467	710
0 to 9	3.3%	0.0%	3.5%
10 to 19	3.4%	4.2%	3.4%
20 to 29	4.8%	1.1%	5.0%
30 to 39	4.4%	0.6%	4.7%
40 to 49	5.3%	0.4%	6.6%
50 to 59	3.5%	1.1%	3.8%
60 to 69	3.5%	2.0%	4.0%
70 to 79	5.1%	1.3%	6.5%
80 to 89	0.9%	1.3%	0.9%
90 to 99	2.4%	2.4%	2.5%
100 to 109	0.9%	1.1%	0.8%
110 to 119	2.5%	2.2%	2.7%
120 to 129	1.0%	0.6%	1.3%
130 to 139	1.2%	1.4%	0.9%
140 to 149	3.2%	1.9%	4.7%
150 to 199	1.5%	1.4%	1.5%
200 to 249	1.5%	1.9%	1.2%
250 to 299	1.4%	2.9%	0.9%
300 to 349	1.8%	2.5%	1.4%
350 to 399	1.0%	2.9%	0.6%
400 to 449	0.4%	3.6%	0.1%
450 to 499	1.7%	11.6%	0.7%
500 to 549	2.8%	21.5%	0.6%
550 to 599	6.6%	48.4%	0.0%
600 to 649	5.5%	40.0%	0.8%
650 to 699	4.9%	34.1%	0.3%
700-799	7.2%	57.9%	0.6%
800+	10.9%	35.8%	0.7%
Overall in Sample	2.9%	5.2%	2.3%

WHAT'S 36% GOT TO DO WITH IT? Does Lender Behavior Support CFPB's Hypothesis That Installment Loans Are Increasingly Unaffordable as Rates Increase?

Table 3: Percentage of Samples Which Had an Occurrence of Default or Charge Off (Full Sample)

PERCENTAGE OF LOANS WHICH HAD A DEFAULT OR A CHARGE OFF			
APR Buckets	% of Loans Which had a Default or Charge Off to All loans in APR Bucket	% of Present Loans Which had a Default or Charge-off to All Present Loans	% of Not Present Loans Which had a Default or Charge-off to All Not Present Loans
COUNT DEFAULT OR CHARGE OFF	8441	392	8049
0 to 9	11.6%	1.2%	12.0%
10 to 19	9.6%	4.0%	9.7%
20 to 29	6.7%	0.3%	7.1%
30 to 39	2.2%	0.7%	2.3%
40 to 49	5.6%	1.1%	6.8%
50 to 59	7.9%	0.5%	9.0%
60 to 69	4.7%	0.3%	6.1%
70 to 79	5.0%	3.0%	5.8%
80 to 89	12.0%	1.6%	14.4%
90 to 99	9.7%	2.4%	15.5%
100 to 109	12.9%	2.7%	18.8%
110 to 119	10.9%	2.9%	15.9%
120 to 129	11.6%	2.2%	19.9%
130 to 139	9.9%	0.4%	23.8%
140 to 149	12.9%	1.3%	27.8%
150 to 199	16.7%	2.2%	24.8%
200 to 249	12.6%	3.4%	20.7%
250 to 299	21.7%	2.3%	29.9%
300 to 349	16.8%	3.5%	25.6%
350 to 399	22.1%	3.8%	26.5%
400 to 449	26.3%	2.6%	29.2%
450 to 499	23.0%	6.4%	24.6%
500 to 549	14.2%	9.7%	14.6%
550 to 599	18.3%	5.6%	20.1%
600 to 649	14.3%	4.8%	15.4%
650 to 699	17.0%	10.2%	18.0%
700-799	10.0%	4.3%	10.6%
800+	20.2%	8.8%	24.7%
Overall in Sample	13.1%	2.7%	16.1%

Table 4: Percentage of Samples Which Had an Occurrence of Default or Charge Off (Sample With Negative Residual Income After Loan Payment)

PERCENTAGE OF LOANS WHICH HAD A DEFAULT OR A CHARGE OFF WITH NEGATIVE RESIDUAL INCOME AFTER LOAN PAYMENT			
APR Buckets	% of Loans Which had a Default or Charge Off to All Loans in APR Bucket	% of Present Loans Which had a Default or Charge-off to All Present Loans	% of Not Present Loans Which had a Default or Charge-off to All Not Present Loans
Count Default or Charge Off	5,433	202	5,231
0 to 9	10.3%	1.9%	10.7%
10 to 19	8.7%	4.2%	8.8%
20 to 29	6.6%	0.0%	7.0%
30 to 39	2.1%	1.2%	2.2%
40 to 49	5.5%	0.8%	6.7%
50 to 59	8.7%	0.0%	9.7%
60 to 69	9.8%	0.0%	12.8%
70 to 79	6.5%	1.3%	8.4%
80 to 89	0.8%	1.1%	0.8%
90 to 99	9.1%	2.4%	13.6%
100 to 109	13.1%	3.7%	16.2%
110 to 119	11.3%	1.1%	32.2%
120 to 129	13.3%	4.9%	15.4%
130 to 139	11.5%	0.6%	35.2%
140 to 149	13.9%	0.3%	36.3%
150 to 199	17.6%	7.7%	18.5%
200 to 249	13.4%	2.9%	21.2%
250 to 299	21.7%	1.7%	29.6%
300 to 349	16.2%	3.8%	23.9%
350 to 399	26.2%	3.7%	30.9%
400 to 449	29.4%	2.1%	32.3%
450 to 499	27.5%	5.8%	29.6%
500 to 549	18.1%	8.3%	19.3%
550 to 599	20.8%	2.2%	23.7%
600 to 649	17.4%	4.4%	19.2%
650 to 699	15.8%	7.7%	17.0%
700-799	11.5%	5.0%	12.4%
800+	22.6%	7.4%	28.8%
Overall in Sample	13.7%	2.5%	16.6%