

Hidden Consumer Loans:

An Analysis of Implicit Interest Rates on Bounced Checks

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Abstract

Payday lending attracts attention for its high interest rates, but bounce protection loans are much more expensive. Bounce protection is a program where consumers overdraft – write checks in excess of the checking account balance – and the bank pays the check allowing the account balance to be negative. For this service/loan, banks charge the standard non-sufficient funds (NSF) fee. When the amount borrowed is low and the time outstanding is short, the effective interest rate paid on this loan can be quite high. Using a unique data set we are able to quantify how high the interest rate is. We find that the median implicit interest paid by consumers is over 4,000%.

1. Introduction

Much attention is given to payday lending, but far less attention has been paid to a competing form of emergency consumer borrowing called bounce protection. Specifically, scrutiny falls on payday lending because of the high interest rates that consumers pay. In contrast, we calculate the median interest rate on bounce protection loans¹ to be in excess of twenty times that of payday loans.

Bounce protection is a relatively new program whereby a bank systematically pays overdraft checks thus leaving a negative balance in the account. Legally, these are not loans, so they do not have to comply with truth in lending regulations which require disclosure of an APR. Thus data on the cost of such loans is scarce. Using a unique data set of checking accounts, we calculate the implicit interest rate implied by the fixed fee, the amount of the overdraft, and the length of time the overdraft is outstanding.

We find that frequent overdrafters can pay fees exceeding \$3,000 per year which implies an interest rate in excess of 1,700%. The median implicit interest rate is calculated to be 4,547%. People over 70 years old pay a median interest rate in excess of 7,000%, the most of any sub-group examined. Although income is not an accurate predictor of an individual's

¹It should be noted that “overdraft loans” is a controversial term. Many people claim since money (credit) is extended to the account holder when an overdraft is paid, it constitutes a loan. Others, people point out that its legal status is clearly not a loan with no loan application, no reported annual percentage rate (APR), and not governed by lending regulations. For more on this issue see Fusaro (2007b).

likelihood to overdraft, those with annual incomes over \$60,000 pay the lowest interest rate of any group examined, 1,542%.

In section 2, we define bounce protection and discuss its importance to bank revenue. Section 3 describes the data set. We analyze overdraft fees, amount borrowed, length of time overdrafts are outstanding and implicit interest rates in section 4. In section 5, we break down the implicit interest rate by several demographic and behavior characteristics. The final section concludes.

2. How to Write Yourself a Loan

When a customer overdrafts (i.e., writes a check against insufficient funds), the depository institution has four options. First, they can transfer money from the customer's savings account to cover the overdraft. Second, they can loan money to the customer to cover the check at a predetermined interest rate. Third, they can pay the check allowing the account to have a negative balance (with no interest charged). Finally, they can return, or bounce, the check.

The first two options are called overdraft protection. When a savings account is used for overdraft protection, the depository transfers money from a designated savings account to cover the overdraft and charges a small fee, usually between \$2 and \$5. Usually, the customer applies for this type of overdraft protection in advance. With a line-of-credit based overdraft protection, the depository loans enough money to cover the overdraft, usually with an interest rate

comparable to credit cards and usually without a fee. The customer must apply for this overdraft protection in advance. Bar-Ilan (1990) modeled this type of overdraft protection. In June 2003, 90% of banks and 78% of credit unions offered one or both kinds of overdraft protection².

For customers not enrolled in overdraft protection or for those whose savings account or line-of-credit is exhausted, the depository faces a decision – bounce the check or pay it. The depository can always bounce the check, but

for good customers – high account balances

or first time overdrafters – often a

depository officer decides to pay the check,

allowing the account to have a negative

balance. This negative balance is

sometimes referred to as a “bounced check

loan”. Over the past decade, several

depositories have begun paying overdrafts

for more than just their best customers. In

addition, systematic methods for determining which overdrafts to pay and which to bounce are

becoming more common. A policy of paying overdrafts is called a *bounce protection* program.

This policy can be applied to overdrafts stemming from paper checks, debit transactions, or

ATM withdrawals³.

Table 1: **Definition of Bounce Protection**

An overdraft check is presented for payment. What can happen?

If customer has Overdraft Protection:

- ① Depository transfers money from another account at the depository
- ② Depository loans money to cover the overdraft

If no overdraft protection, bank can:

- ③ **Bounce Protection:**
Pay Overdraft checks
“Bounced Check Loan”
- ④ Bounce Overdraft checks

²Source: author’s calculation based on data provided by Moebs Services, Lake Bluff IL.

³Most commonly, bounce protection applies to paper checks but some banks (20% in June 2004, according to Moebs Services) are applying the program to debit or ATM transactions also.

Consumers use bounce check loans in two ways. First, they use it as a form of overdraft protection. When consumers make mistakes with their checking account, a bank with bounce protection often pays the check, saving the consumer the embarrassment and costs associated

with a bounced check. Alternatively, many consumers intentionally bounce checks as a way of providing themselves liquidity.

Fusaro (2007b) finds that the former accounts for 80% of overdrafts.

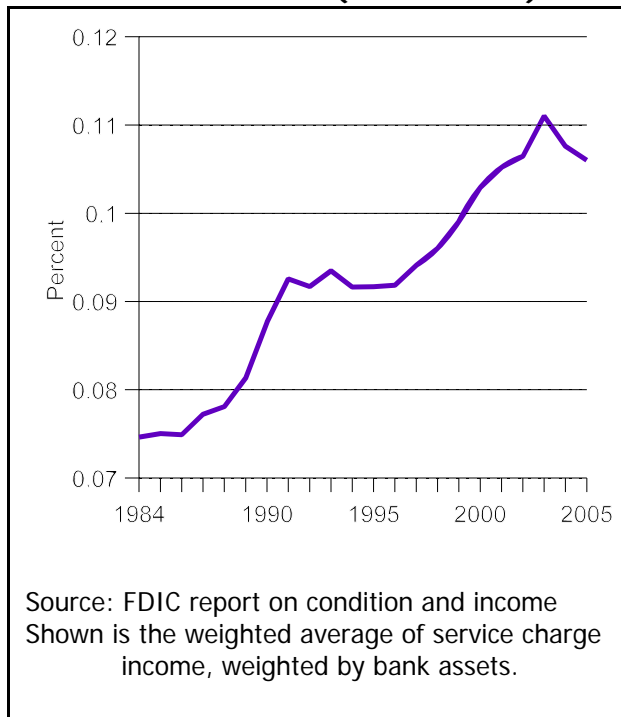
The bounce protection program offered by the institution which provided the data is similar to other programs. Some banks have established formalized programs where the overdrawn amount is capped and the criteria for eliminating an account's bounce protection eligibility is well defined.

Other banks, the data provider included,

handle overdrafts on a case-by-case basis. This institution automatically enrolls all of their accounts in overdraft protection so all overdrafts occur when the account holder has no money in a checking or savings account.

Whether bounce protection enhances or diminishes consumer welfare depends on how we analyze it. If we look at a single overdraft in isolation then bounce protection looks beneficial to the consumer. Conditional on a consumer having written an overdraft, absent

Figure 1: Service Charge Income as a Percent of All Income (1984 - 2005)



National	0.512	
District 1	0.738	New England
District 3	0.286	East and Central PA, Southern Half of NJ, DE
District 6	0.604	FL, GA, AL, most of TN, Souther Halves of MS and LA
District 10	0.567	OK, KS, CO, WY, NE, Northern Half of NM, western edge of MO
District 11	0.800	TX, Southern Half NM, Northern half of LA

bounce protection the check is bounced, the consumer pays a non sufficient funds (NSF) fee and faces the consequences of the check being bounced. If the bank pays the check, the consumer still pays the NSF fee but avoids the consequences of the bad check. Clearly the consumer would rather have the check paid.

However, looking at the program dynamically, it is not as clearly beneficial for consumers. Research shows that when a bank pays overdrafts, customers overdraft 50% more (Fusaro, 2003). This fact explains why banks have embraced bounce protection. Data on the revenue banks derive from bounce protection is scarce, but one industry estimate⁴ is that 60% of service charge income comes from NSF fees. Figure (1) charts the rise in these service charge incomes over the period 1984 to 2006. This represents a rise from a low of 7.5% in 1984 to a high of 11.1% in 2003. Service charge's share of revenue has grown by a factor of nearly one half. In absolute numbers the weighted average service charge income has grown from \$26 million to \$1.49 billion over the same time period. This represents a compound annual growth rate of 21% over a period where assets (scale) were growing at a rate of 8.9% and the CPI has

⁴Source: Moeb's Services, Lake Bluff IL.

grown at 3.1%. Further, the period of growth from the late nineties extending into the 2000s coincides with bounce protection's commencement.

Service charges are a profitable income source for banks regardless of size, market share, and level of competition. They, however, show a regional pattern. Table (2) reports the average service charge income as a percent of deposits for the nation as a whole and for selected federal reserve districts. The cheapest federal reserve district is the Philadelphia district which includes Pennsylvania (with the exception of Pittsburgh, Erie and the other western counties), Delaware, and southern New Jersey. In this region, service charge revenue is nearly half of the national average (0.286 compared to 0.512). New England is significantly more expensive than the national average. The other expensive region is the south and plains states comprising the 6th, 10th and 11th federal reserve districts. These districts comprise an "L" shaped region from Florida and Georgia across to Texas and New Mexico and up to Wyoming and Nebraska. The region with the highest level of service charge income relative to deposits is the 11th federal reserve district, which has most of its population in Texas.

3. The Data

This paper employs a sample of bank account transaction records from 2,042 checking accounts to analyze the dollar amounts and implicit interest rates paid on overdraft bounce protection loans. After removing observations for which no paycheck (income) information exists, there are 1399 observations left. These data come from a small depository institution in

the Midwest US. It includes customer information and all transactions with associated balances from May, June, July and August 2003. An overdraft transaction is any transaction which leaves the account in a negative balance for at least one day. In addition, the data contain the cumulative number of overdrafts since the account was opened and savings account balance if one exists.

Table (3) shows summary statistics for the data set. The average customer receives semi-monthly paychecks for an annual income over \$31,600. (Note that any income not passing through this account is not observed.) Paychecks are identified only for the 1399 of the accounts which have clearly labeled directly deposited paychecks. Few have a savings account at the same institution, but those who do, maintain an average balance over \$8300. The interest rate reported is the average daily interest rate where the daily interest rate fluctuates with the account balance. In particular, a savings account with less than \$500 earns no interest and a checking account with under \$2000 earns no interest. The average account holder is 47 years old; the average account has been opened over 10 years; a little over half of the accounts are joint accounts; a little under half of the account holders are male.

Nearly one quarter of account holders overdraft during the sample period for an average of 3.1 pay periods in which they overdrafted. Almost 57% of account holders have overdrafted at least once since opening their accounts. Customers, on average, overdrafted 46.2 times in the, on average, 10 years since opening their accounts. The distribution is skewed with 42 percent never overdrafting and a few outliers overdrafting several hundred times.

The minimum and maximum checking account balance are observed for each pay cycle, averaged within an account to get an average minimum and average maximum for each account.

Table 3: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	Units
Annual Income	1399	31,657	22,593	1217	275,198	\$
Pay Period Length	1399	15.0	7.01	5	30	Days
Checking Acct Bal (Max ^a)	1399	2821	4697	-133	91,670	\$
Checking Acct Bal (Min ^a)	1399	1568	4365	-1595	88,578	\$
Savings Acct Balance	137	8317	17,792	25	148,471	\$
Interest Rates Paid:						
on Savings Deposits ^b	83	0.85	0.27	0.21	1.25	%
on Checking Deposits ^b	1399	0.10	0.12	0	.034	%
Positive Only ^b	949	0.14	0.12	.0028	.034	%
Overdraft in Sample ^c	1399	.219	-	-	-	Indicator
Sample Overdrafts ^d	306	3.1	2.8	1	21	# of PayPds
Overdraft Pre-Sample ^e (OD)	1399	.568	-	-	-	Indicator
Pre-Sample Overdrafts ^f	795	46.2	93.6	1	741	# of ODs
Sample Overdrafts ^g	795	1.1	2.3	0	21	# of PayPds
Age of Account Holder	1399	46.9	13.2	17	94	Years
Tenure of Account	1399	10.4	6.2	0.2	23.6	Years
Joint Account	1399	.548	-	-	-	Indicator
Gender (Male)	1281	.454	-	-	-	Indicator

^aMaximum and Minimum for payperiod

^bAverage Daily Interest Rate

^cIndicator for whether or not individual overdrafted during sample period

^dNumber of pay periods in which individual overdrafted in 3 month sample conditional on overdrafting in sample

^eIndicator for whether or not individual overdrafted since account was opened

^fNumber of overdraft checks since account opened (10.4 years on average) conditional on overdrafting once

^gNumber of pay periods in which individual overdrafted in sample conditional on overdrafting previously

The average across accounts is reported in table (3). For a further explanation of the minimum and maximum see Baumol (1952), Tobin (1956) or Fusaro (2007b). Naturally, the lower an individual's account balance, the more likely the individual will overdraft. The average account minimum is \$1,568.

Table (4) shows the joint distributions of Overdrafts vs Age and Overdrafts vs Income. As expected, overdrafters are skewed toward younger customers, reflecting either a generational stigma toward bounced checks which is weaker among younger generations or the returns to

experience in personal financial management. We see this trend even though older account holders have had their accounts longer. In all categories greater than an overdraft every other year, younger account holders dominate. The Kolmogorov-Smirnov equality-of-distributions test is used to verify that indeed the younger and older age categories differ statistically from the average.

The second tier of table (4) shows number of overdrafts by income. Unexpectedly, no

Table 4: **Distribution of Overdrafts by Age and Income**

Average Annual Lifetime Overdrafts:	Percent of Category Population ^a					Number of Individuals in Category					Total
	0	0 - 0.5	0.5 - 2	2-12	12+	0	0 - 0.5	0.5 - 2	2 -12	12+	
By Age:											
18 – 37	30	14	17	23	16	106	49	61	83	58	357
38 – 45	36	19	21	14	10	124	66	71	47	33	341
46 – 54	48	18	14	12	8	166	62	49	40	26	343
55 and better	58	19	10	7	7	208	67	35	24	24	358
By Income:^b											
up to \$18	46	13	15	14	12	158	45	52	49	42	346
\$18 – \$27.5	41	16	15	17	15	145	57	52	62	42	358
\$27.5 – \$39.5	45	18	17	11	9	157	64	61	37	30	349
\$39.5 and up	42	23	15	13	8	144	78	51	46	27	346
Total	43	17	15	14	10	604	244	216	194	141	1399
Overdrafts as % of Checks Written:											
	0	< .18	< .68	< 4.5	> 4.5	0	< .24	< 1.2	< 10	> 10	Total
By Income:^b											
up to \$18	49	10	16	15	14	156	33	54	50	47	340
\$18 – \$27.5	40	14	17	22	7	144	50	59	79	25	357
\$27.5 – \$39.5	45	19	17	14	5	157	65	61	48	18	349
\$39.5 and up	42	27	15	13	2	144	99	51	44	8	346
Total	43	18	16	16	7	601	247	225	221	98	1392

^aRows Percentages sum to 100%

^bAnnual income in thousands of dollars

discernable patterns emerge from these data indicating that people of all income levels overdraft equally often. In the bottom tier we control for the number of checks written with the same results. The results of the Kolmogorov-Smirnov test indicate that all income levels overdraft equally, regardless of whether we control for number of checks written (i.e., we can not reject the hypothesis of no difference between the rows).

4. Implicit Interest Rates of Overdraft “Loans”

In this section, we examine the amount of money paid for an overdraft, days outstanding and implicit interest rate on overdrafts by overdrafter type, (i.e., by frequency of overdrafts). Table (5) shows several descriptive statistics for four groups of customers who overdrafted during the sample period. The first column contains information for occasional overdrafters, those who overdraft at a rate less than ten times on an annual basis. If ten sounds high, keep in mind that one incident will often generate more than one overdraft check. Be aware of the selection bias implicit in this number. Any customer who overdrafts once per quarter is likely to overdraft during the four month long sample period. Those who overdraft once per year have a one third chance of overdrafting during the sample period. Therefore, the sample is skewed toward those who overdraft a few times a year over those who overdraft once per year. The second column is titled “one standard deviation away” and it contains those within one standard deviation of the average. The third column contains those who “frequently” overdraft and the fourth column contains the worst “chronic” overdrafters (100 or more overdrafts per year).

Comparing these classes of account holders – occasional overdrafters, within a standard deviation, frequent overdrafters, and chronic overdrafters – along several dimensions is instructive. First, consider the overdraft fees paid in an average year by each category of customer. This is the average number of overdrafts for each category multiplied by \$21.39, the industry average overdraft fee in 2003⁵. Occasional overdrafters are paying an average of \$112 per year in overdraft fees. This does not include NSF fees paid on bounced checks, only paid overdrafts. Frequent and chronic overdrafters are spending \$1,280 and \$3,440 in annual overdraft fees. The good news is that four-fifths of the account holders did not overdraft at all and these two groups (frequent and chronic overdrafters) make up less than 6% of bank customers.

Table 5: Overdraft Characteristics by Overdraft Volume

	Occasional Overdrafts, 1 to 10	One Std Away, 10 to 30	Frequent Users, 30 to 100	Chronic Users, over 100
Percent of Accts in Category ^a	9.8%	4.7%	4.6%	1.1%
Average Annual Overdrafts	5.2	18.7	59.9	161
Annual Fees Paid	\$112	\$400	\$1280	\$3440
Average Overdraft Size	\$306	\$104	\$101	\$90
Average Account Deficit	\$122	\$61	\$67	\$78
Avg Days Deficit Outstanding	4.6	5.0	6.3	7.0
Implicit APR (median)	6,350%	5,327%	3,527%	1,718%
Number of accounts in category	137	66	64	16

^aDo not sum to 100. The other 79.8% never overdrafted hence all entries are zero.

⁵Source: Author's calculation based on data provided by Moebs Services, Lake Bluff, IL.

The next two rows show the size of the average check which is paid and amount borrowed. The average overdraft check and deficit are calculated for each customer, then the average across customers is reported for each category. Amount borrowed differs from average check size only in that any overdraft check which is presented when the account is positive is counted only to the extent that the account is left in deficit. For instance, an account has \$100 and a \$150 check is presented. For calculating the average overdraft size, the whole \$150 is used; but for calculating the average deficit, only \$50 is used. Interestingly, average check size decreases with the overdrafts frequency. Occasional overdrafters' check sizes average \$306 per overdraft while frequent and chronic overdrafters average \$101 and \$90 respectively. One might argue, based on these numbers, that occasional overdrafters are paying large overdraft fees only for serious cases, that they are more wise. However, the subsequent row paints a different picture as the spread seen in the above row disappears. Indeed, the difference between \$122, \$61, \$67 and \$78 is not great given that the standard deviation of this variable is \$286. The discrepancy shown in the previous paragraph is explained by occasional overdrafters carrying larger balances than more frequent overdrafters so that it takes a larger check to overdraw the account of an occasional overdrafter. Due to the typically low account balance of frequent and chronic overdrafters, however, a smaller check can overdraw the account.

With such high overdraft fees for such small loans we would expect astronomical APRs. In order to calculate the interest rate implied by a loan amount, a fee paid, and the time outstanding, we use the concept of yield on a discount basis. Thus the interest rate for a single

overdraft is:

$$APR = \frac{\text{OD Fee}}{\text{Deficit}} * \frac{365}{\text{Days outstanding}} \quad (1)$$

We can use this formula to calculate the interest rate for a payday loan. In the Midwest, payday loans typically cost \$15 per \$100 borrowed for a two week loan⁶. These numbers imply an interest rate of 195%.

In our data, many bank customers overdraft several times. We pool the fees and borrowed amounts to calculate one implicit interest rate for each individual in the data. The relevant interest rate formula is:

$$APR_i = \frac{(\# \text{ of Overdrafts}_i)(\text{OD Fee})(365)}{\sum_{j=1}^{\# \text{ overdrafts}} (\text{Deficit}_{ij})(\text{Days Outstanding}_{ij})} \quad (2)$$

Using this formula we calculate the implicit interest rate for each individual in the data. Table (5) reports the median individual in each of the four categories. The difference between the groups is stark. We have already seen that the average amount of the loans is not widely different across the groups but the frequent and chronic overdrafters borrow the money for a longer period of time than do the occasional overdrafters. This makes their imputed APRs much lower for the more frequent overdrafters. The median individual's APR in each group is quite high but is especially high for the occasional overdrafters.

So while the total dollars going toward service fees paint a picture of some people with good financial management and others with very poor financial management skills, the APRs being paid paints the opposite picture. It says first that all of them are (ex-post) sub-optimal paying too much to borrow. It also paints a picture of frequent overdrafters being better at it, making better use of their borrowing, keeping the money for a longer period of time.

⁶Source: Consumer Credit Research Foundation, Washington, DC. The figures for the Midwest are chosen for comparison with our overdraft data.

5. Interest Rates and Demographics

In order to ascertain how several different groups fare with respect to the implicit interest rate paid on overdraft loans, we divided the data according to age, account tenure, income, paycheck frequency, a joint account indicator, gender, a social security recipient indicator, and a debit card user indicator. The median implicit interest rate of each group across each of these eight categorizations is reported in table (6). The most striking differences occur for account holders over 70 years old and for those with annual income over \$60,000. Account holders over 70 have a strikingly high median interest rate. Account holders with more than \$60,000 in annual income have the lowest implicit APR of any group analyzed. This difference is quite striking, given that income is not correlated with the amount of overdrafts that people write, as reported in table (3). High income individuals are just as likely to overdraft but are more sophisticated in their ability to get a less unfavorable interest rate.

In order to determine whether the witnessed differences are statistically distinct from

Table 6: **Median Implicit Interest Rates by Category**

<u>Age</u>	<u>Rate</u>	<u>Tenure</u>	<u>Rate</u>	<u>Income</u>	<u>Rate</u>	<u>Paycheck</u>	<u>Rate</u>
<40	4,722%	< 5 years	4,253%	<15,000	4,334%	weekly	5,708%
41-55	4,638%	5-10	4,563%	15-30	4,632%	bi-week	4,595%
55-70	3,288%	10-20	4,621%	30-60	4,663%	semi-mo	2,310%
>70	7,741%	>20	5,052%	>60,000	1,542%	monthly	3,000%
joint	4,223%	male	5,594%	soc sec	3,165%	debituser	4,898%
single	4,789%	female	4,113%	not ss	4,636%	non-user	2,453%

Sample median: 4,547%

Medians for all categories, except for joint accounts, differ significantly the 1% level.

each other, we performed two classes of tests. For the indicator variables, we performed the Wilcoxon / Mann-Whitney rank-sum test. According to this test females', social security recipients', and debit non-user's implicit interest rates are significantly lower at the 1% level. There is no statistical difference between the medians for joint accounts versus single-signer accounts. To test age, account tenure, income and paycheck frequency categorizations we performed the nonparametric k-sample test of the equality of medians which uses Pearson's chi-squared test (see Bland, 2000). According to the test, each category is statistically different from the sample median at the 1% level.

Table 7: APR by Age and Social Security Recipient

Age	Social Security Recipient	
	No	Yes
<40	4,847%	3,728%
40-55	4,821%	2,314%
55-70	3,470%	3,081%
<70	NA	7,741%

Take note of the difference between people who receive bi-weekly paychecks versus semi-monthly paychecks. Bi-weekly paychecks are paid every 14 days. Semi-monthly paychecks are received approximately every 15 days. This difference could be due to the types of employees who are paid bi-weekly versus semi-monthly (e.g., hourly versus salaried). Also, budgeting is potentially easier when paychecks better align with

expenses or billing cycles.

Notice now that people over 70 years old pay exceptionally high APRs but social security recipients pay low APRs. Table (7) looks further into this apparent inconsistency. First, we must note that a quarter of the accounts receiving social security checks are registered to people less than 62 years old. These people are likely receiving social security disability benefits. Some could also be joint accounts between a social security retiree and a younger individual

(most likely an adult child/caretaker). It turns out that the low average APRs paid by social security recipients is due to those below age 62 (who receive disability or joint accounts) and people between age 62 and 70 receiving social security pension benefits. In these groups of social security recipients have lower APRs than non-recipients.

Debit card users also, show a stark difference from debit non-users with debit users

paying nearly double the median APR of non-users. Those who usually pay by check, have more opportunities to overdraft than those who use a debit card. Those who use a debit card also differ from those who pay by credit card. Indeed, Fusaro (2007a) finds that debit cards are used as an instrument of spending management by those who lack self control. Their higher APRs reinforce the notion that debit users are poor financial managers.

Finally, in an attempt to get a more comprehensive view of the factors that correlate with implicit interest rates, we regress log of implicit interest rate on the eight variables used above. Regression results are reported in table (8). Only income, gender and debit user are statistically significant. The contrast between the highly significant results for the medians (table 6) and the sparse significance of the linear (means) regressions indicates that outliers have a large effect on the means. This should not be surprising in an environment where a person who has a three dollar overdraft that is outstanding for one day pays an implicit interest rate of 260,245%. (This example is the most extreme case in the data.)

Table 8: **OLS Estimates of APR**

	<u>Coeff</u>	<u>Std Err</u>
Constant	3.8358	0.4042
Age	-0.0030	0.0075
Acct Age	0.0137	0.0157
Income ^a	-0.0081 [†]	0.0033
Pay Period	-0.0172	0.0144
Joint Acct	-0.0421	0.1658
Male	0.4063 [†]	0.2054
Soc Sec	-0.1084	0.2738
Debit User	0.6850*	0.1818

^aIn thousands of dollars

Significant at [†]5%, *1%

Dependant Variable: Log APR

6. Conclusion

Clearly, bounce check loans are not a good source of short term debt. By breaking down the fees paid and implicit interest rates, according to categories of overdrafters we see how expensive it is especially for the most frequent overdrafters. With annual fees totaling over \$3,000 and four digit interest rates, most frequent users pay quite heavily for the money that they borrow. This compares to similarly calculated interest rates of 195% for payday loans.

The differing implicit interest rates across categories are more difficult to interpret. Stark differences exist in median interest rates across several categories including income and age. However, it is unclear what these high interest rates signal about consumers. Are those who pay high interest rates getting the worst of bounce protection? Or perhaps high interest rates signal people who are not borrowing but simply making an unintentional checking account mistake. The alternative for people who make a checking account mistake is a bounced check. For these people, incurring a \$20 fee and having the check paid is better than incurring a \$20 fee and having the check bounced. These questions are matters of interpretation for policy makers, consumers, and bankers.

7. References

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