APPENDIX

1. Descriptive Statistics

To establish relationships among credit repayment, socioeconomic characteristics, personality traits, cognition, and preferences, in this section we perform a disaggregated analysis of the data. As a first approximation to the possible link between repayment and the rest of the variables, we outline some patterns that may be discerned in the data.

1.1 Sociodemographic and Credit Information

In terms of age, number of children and gender, (i) individuals with more severe delays in repayment are five years younger on average; (ii) there is no significant difference in the number of children of individuals in the *Low Arrear* and *High Arrear* groups, while the average number of children of individuals in the *Current* group is 25% lower; and, (iii) there is a higher presence of women in the *Current* group compared to the other two groups, though the difference is small.

Also, there is a higher number of individuals in full-time employment in the *Current* group and a lower number of individuals who are self-employed. There is an interesting observation with respect to income: the average *High Arrear* individual has a verifiable income that is 25% higher than that of the average *Current* individual. However, the average *Current* individual has a non-verifiable income that is 58% higher than that of the average *High Arrear* individual. So, the probability of belonging to the Current group is slightly higher for an individual who is older than 35 years old, has fewer dependents, is a woman, and has a higher level of non-verifiable income.

In addition, *Current* individuals have average loans that are approximately 1,000 pesos higher and have a total average amount of 2,300-2,500 pesos more to pay than individuals in the other two groups. With respect to weekly payments, the *Low Arrear* group pays 10% more than the *High Arrear* group and the *Current* group pays 15% more than the *Low Arrear* group. Moreover, we observe that the number of active loans monotonically increases when moving from the *High Arrear* group (0.6), *Low Arrear* group (1.19), and *Current* group (1.36), in that order. For more details, see Tables A1, A2, A3.

Table A1: Group High Arrear (completed questionnaires).

	N	Average	Std. Dev.	Min	Max
Age	100	35.42	11.03	19	60
Number of dependents	100	0.45	0.98	0	4
Verifiable Income	100	2.456	3,135.5	0	13
Non-verifiable Income	100	3,443.15	3,301.31	0	16.2
Total Loans	100	2.26	1.85	1	13
Active Loans	100	0.6	0.59	0	2
Amount Active Loans	55	4,916.36	2,735.01	1.5	14.7
Total to be paid	55	9,728.11	5,622.12	2.835	29.106
Delayed Amount	55	3,690.42	2,646.05	560	12.813
Weekly Payment	55	240.51	112.81	90	705.6

	Observations (N)	Frequency
Employment	100	—
Housewife	2	0.02
Self-Employed	44	0.44
Unemployed	6	0.06
Part Time Employed	12	0.12
Full Time Employed	35	0.35
Retired	1	0.01
Gender	100	—
Female	61	0.61
Male	39	0.39
Cellular Phone	100	—
No	3	0.03
Yes	97	0.97
Landline	100	—
No	80	0.8
Yes	20	0.2
Home	100	—
Rents	5	0.05
Owns	61	0.61
Lives with parents	34	0.34

Table A2 Group Low Arrear (completed questionnaires).

	N	Average	Std. Dev.	Min	Max
Age	100	40.9	11.98	20	68
Number of dependents	100	0.47	0.92	0	5
Verifiable Income	100	2,071.5	3,118.89	0	14
Non-verifiable Income	100	4,438	3,941.95	0	20
Total Loans	100	3.85	2.8	1	14
Active Loans	100	1.19	0.46	0	2
Amount Active Loans	97	5,998.97	3,775.01	1	19.5
Total to be paid	97	12,120.42	7,849.24	1.89	40.17
Delayed Amount	97	2,460.69	2,291.03	-40	9.75
Weekly Payment	97	265.59	145.35	60	780

	Observations (N)	Frequency
Employment	100	—
Housewife	3	0.03
Self-Employed	46	0.46
Unemployed	7	0.07
Part Time Employed	2	0.02
Full Time Employed	42	0.42
Retired	0	0

Gender	100	—
Female	64	0.64
Male	36	0.36
Cellular Phone	100	—
No	16	0.16
Yes	84	0.84
Landline	100	—
No	74	0.74
Yes	26	0.26
Home	100	—
Rents	7	0.07
Owns	72	0.72
Lives with parents	21	0.21

Table A3: Group Current (completed questionnaires).

	N	Average	Std. Dev.	Min	Max
Age	101	39.87	13.3	19	68
Number of dependents	101	0.34	0.75	0	3
Verifiable Income	101	1,482.18	2,953.83	0	10
Non-verifiable Income	101	5,425.74	4,552.18	0	35
Total Loans	101	4.57	3.39	1	17

Active Loans	99	1.36	0.52	0	2
Amount Active Loans	99	7,090.91	4,598.94	1.5	21.5
Total to be paid	99	14,410.02	9,546.64	2.835	44.29
Delayed Amount	99	1,256.41	2,188.53	-2.52	8.9
Weekly Payment	99	305.16	177.34	72	860

	Observations (N)	Frequency
Employment	101	—
Housewife	0	0
Self-Employed	28	0.2772
Unemployed	8	0.0792
Part Time Employed	3	0.0297
Full Time Employed	62	0.6139
Retired	0	0
Gender	101	—
Female	67	0.6634
Male	34	0.3366
Cellular Phone	101	—
No	11	0.1089
Yes	90	0.8911
Landline	101	—
No	75	0.7426
Yes	26	0.2574
Home	101	—
Rents	6	0.0594
Owns	58	0.5743
Lives with parents	37	0.3663

1.2 Grit

The average *Grit* scale for the entire sample of 298 observations is 3.39 with a standard deviation of 0.465. When comparing the results of the *High Arrear* and *Low Arrear* groups, we find no significant differences. On the other hand, *Current* individuals obtain a *Grit* scale that is 0.10 times higher, on average, than that of the two other groups and a standard deviation of 5, also 0.7-0.9 times higher. We observe that *Current* individuals do not get discouraged by setbacks and maintain their attention on projects lasting longer than a few months more often than individuals in the other groups do. Moreover, *Current* individuals report working hard more often than *High Arrear* individuals, though less often than *Low Arrear* individuals. See Tables A4, A5, and A6.

Finally, concerns about self-reporting bias could be valid since it is plausible to think that the individuals' answers were motivated by an interest in signaling their creditworthiness to *Provident*. However, all of the surveyed individuals already have at least one loan with this institution. Furthermore, the answers to the *Grit* questions would not increase their likelihood of obtaining a new credit (see the previous section).

Table A4: Grit Scale: *Current* Group

Question	N	Average	S.D.
Q1. New projects or ideas distract me from projects I already have.	101	3,366337	1,092911
Q2. Setbacks do not discourage me.	101	3,465347	1,300495
Q3. I was focused on an idea or project for a short time, but I lost interest shortly afterwards.	101	2,90099	1,253036
Q4. I work hard.	101	4,514851	0,8076368
Q5. I often set a goal, but afterwards I try to reach a different goal.	101	3,207921	1,267413
Q6. It is difficult for me to keep my attention on projects that last more than a few months to complete.	101	2,960396	1,31849
Q7. I am a hard worker	101	4,732673	0,6146721
GRIT Scale (completed questionnaires)	101	3,468175	0,5147295

Table A5: Grit Scale: *Low Arrear* Group

Question	N	Average	S.D.
Q1. New projects or ideas distract me from projects I already have.	100	3,29	1,139688
Q2. Setbacks do not discourage me.	100	3,23	1,20483
Q3. I was focused on an idea or project for a short time, but I lost interest shortly afterwards.	100	3,25	1,157976
Q4. I work hard.	100	4,61	0,6947858
Q5. I often set a goal, but afterwards I try to reach a different goal.	100	3,36	1,105724
Q6. It is difficult for me to keep my attention on projects that last more than a few months to complete.	100	3,15	1,157976
Q7. I am a hard worker	100	4,73	0,6171783
GRIT Scale (completed questionnaires)	100	3,36	0,419323

Table A6: Grit Scale: *High Arrear* Group

Question	N	Average	S.D.
Q1. New projects or ideas distract me from projects I already have.	100	3,31	0,9607972
Q2. Setbacks do not discourage me.	100	3,2	1,13707
Q3. I was focused on an idea or project for a short time, but I lost interest shortly afterwards.	100	2,98	1,118982
Q4. I work hard.	100	4,2	0,9320337
Q5. I often set a goal, but afterwards I try to reach a different goal.	100	3,14	1,063822
Q6. It is difficult for me to keep my attention on projects that last more than a few months to complete.	100	3,13	1,097794
Q7. I am a hard worker	100	4,65	0,5924611
GRIT Scale (completed questionnaires)	100	3,36	0,419323

1.3 Time and Risk Preferences, Financial Knowledge, and Cognitive Ability

We observe no significant differences in terms of short- and medium-term preferences among the groups, except for a noticeable preference for the short-term by the *Current* individuals. All groups display impatience in their answers, preferring to receive their payments sooner than later.

Using the answers to questions 10 and 11, we construct the variables Time Preference 1 and Time Preference 2. We note that the only group that displays a short- and medium-term preference for the future of below 10% is the Current group. The variable Time Preference 2 shows cases of individuals that have different time preferences in the short-term than they do in the medium-term. For example, in one case an individual prefers the present (one month) in the short-time while preferring the future (fourteen months) in the medium-term. By constructing this variable, we aim to identify cases in which there is a change in the short-term preference for the present

In terms of risk aversion, the results indicate that there is a negligible difference in the risk aversion level of the three groups, with the exception that the *High Arrear* group presents a level of risk aversion that is 7% higher than that of the *Low Arrear* group. We transform this measure into a new standardized variable labeled Aversion3 due to the high variability in the answers of risk aversion question. The *Current* and *Low Arrear* groups show very similar average and standard deviation; while the average and standard deviation of the *High Arrear* group are higher than those of the *Low Arrear* group.

Simple interest calculation and a having a notion about inflation are used to measure individuals' basic financial knowledge. For the question about simple interest calculation, we use a unique transformation, Savings Account Quad. Dev. 1, as the answers tend to be very high in value. We notice that, using the transformation, the *High Arrear* group proves to be above average. The reason for this is the high standard deviation in the answers of this group with respect to those of the other two groups. The same group, *High Arrear*, is the group with the highest frequency of incorrect answers to the question about inflation, though there seems to be no significant difference with respect to the other two groups.

To measure the individuals' cognitive abilities, we used the question about the bate and the baseball. We used two normalized versions of this variable since the original answers we obtained were all incorrect and diverse. The first transformation, Q9 Baseball Quad. Dev. 1, measures the deviation with respect to the average; while the second transformation, Q9 Baseball Quad. Dev. 2, measures the deviation with respect to the correct answer. We notice important changes among the groups in the second transformation, especially when comparing the *High Arrear* and *Low Arrear* groups. Given that there is no correct answer in this sample, there are no values equal to zero for this second transformation. It is noticeable that, on average, people in the *High Arrear* group are closest to the correct answer, while individuals in the *Current* group are farthest from the correct answer.

Finally, we constructed a variable, Level of Schooling, to indicate whether the individual's level of education was Elementary School (Years 1-6) or below, Middle School (Years 7-9), High School (Years 10-12), or College or higher. The difference between the *High* and *Low Arrear* groups is not significant and, surprisingly, the *Current* group shows the highest proportion of individuals that have an Elementary School education or less.

We consider these descriptive statistics rather startling (See Tables A7, A8, and A9) because it seems that time preferences, and cognitive ability do not explain the probability of belonging to the *Current* group. Moreover, being more risk averse seems to be a more pronounced trait in the *High Arrear* group, while a lower level of schooling that of the *Current* group.

Table A7: Descriptive Statistics and Distributions Questions 8-16: *High Arrear* Group

Question:	N	Average	Std. Dev.	Mode (mentions)	Min	Max
Q8. Tanda Toss	100	567	364.89	1,000(32)	0	1
Aversion3	100	0.926	0.873	1.218(32)	0.002	2.384
Q9. Baseball Cost	100	46.8	522.258	10(39)	10	210
Q9 Baseball Quad. Dev. 1	100	0.28	0.48	0.199(39)	0	2.49
Q9 Baseball Quad. Dev. 2	100	0.456	0.932	0.003(39)	0.002	4.31
Q12. Savings Account	100	5,587.02	12,715.4	2,000(22)	200	120
Q12 Savings Account Quad. Dev. 1	100	1.826	14.926	0.142(22)	0.025	149.5
Q16.1 Minors	100	1.07	0.8675	1(126)	0	4

Q16.2 Older Adults	100	0.48	0.6587	0(61)	0	2
Q16.3 Other dependents	100	0.41	0.5522	0(62)	0	4

	Observations (N)	Frequency
Q10. Short term Patience	100	—
Receive $1,000 in one month	73	0.73
Receive $1,100 in two months	27	0.27
Q11. Long term Patience	100	—
Receive $1,000 in 13 months	83	0.83
Receive $1,100 in 14 months	17	0.17
Time Preference 1	100	—
Impatient	68	0.68
Patient	12	0.12
Changed	20	0.2
Time Preference 2	100	—
Impatient	68	0.68
Changed or Patient	32	0.32
Q13. Deflation	100	—
False	56	0.56
True	44	0.44
Q14. Level of Education (completed or initiated)	100	—
Primary School or Less	30	0.3
Secondary School	33	0.33
Preparatory School	29	0.29
College or More	8	0.08
Q15. Marital Status	100	—
Single	20	0.2
Living Together, Not Married	20	0.2
Married	49	0.49
Divorced	6	0.06
Widower	5	0.05

Table A8: Descriptive Statistics and Distributions Questions 8-16: *Low Arrear* Group

Question:	N	Average	Std. Dev.	Mode (mentions)	Min	Max
Q8. Tanda Toss	100	608	379.18	1,000(40)	0	1
Aversion3	100	1.002	0.824	1.218(40)	0.002	2.384
Q9. Baseball Cost	100	54.68	109.95	10(54)	8	1
Q9 Baseball Quad. Dev. 1	100	1.23	9.17	0.199(54)	0	91.69
Q9 Baseball Quad. Dev. 2	100	0.456	0.932	0.003(39)	0.001	101.45
Q12. Savings Account	100	4,724.72	6,244.57	1,200(34)	1000	30
Q12 Savings Account Quad. Dev. 1	100	0.448	0.831	0.214(34)	0.003	6.832
Q16.1 Minors	100	0.96	0.96	1(39)	0	4
Q16.2 Older Adults	100	0.34	0.34	0(70)	0	2
Q16.3 Other dependents	100	0.44	0.44	0(63)	0	4

	Observations (N)	Frequency
Q10. Short term Patience	100	—
Receive $1,000 in one month	76	0.76
Receive $1,100 in two months	24	0.24
Q11. Long term Patience	100	—
Receive $1,000 in 13 months	76	0.76
Receive $1,100 in 14 months	24	0.24
Time Preference 1	100	—
Impatient	69	0.69
Patient	17	0.17
Changed	14	0.14
Time Preference 2	100	—
Impatient	69	0.69
Changed or Patient	31	0.31
Q13. Deflation	100	—
False	64	0.64
True	36	0.36
Q14. Level of Education (completed or initiated)	100	—
Primary School or Less	33	0.33
Secondary School	38	0.38
Preparatory School	26	0.26
College or More	3	0.03
Q15. Marital Status	100	—
Single	17	0.17
Living Together, Not Married	17	0.17
Married	60	0.6
Divorced	2	0.02
Widower	4	0.04

Table A9: Descriptive Statistics and Distributions Questions 8-16: *Current* Group

Question:	N	Average	Std. Dev.	Mode (mentions)	Min	Max
Q8. Tanda Toss	100	574.5	391.03	1,000(34)	0	1
Aversion3	100	1.062	0.836	1.218(34)	0.002	2.384
Q9. Baseball Cost	100	60.72	120.65	10(53)	10	1.01
Q9 Baseball Quad. Dev. 1	100	1.48	9.56	0.199(53)	0	93.64
Q9 Baseball Quad. Dev. 2	100	1.80	10.64	0.003(39)	0.003	103.5
Q12. Savings Account	100	6,277.04	7,925.26	1,200(34)	0	40
Q12 Savings Account Quad. Dev. 1	100	0.716	1.685	0.214(34)	0.027	13.557
Q16.1 Minors	101	0.9604	0.8935	1(40)	0	4
Q16.2 Older Adults	101	0.297	0.5205	0(74)	0	2
Q16.3 Other dependents	101	0.3762	0.6907	0(71)	0	4

	Observations (N)	Frequency
Q10. Short term Patience	100	—
Receive $1,000 in one month	88	0.88
Receive $1,100 in two months	12	0.12
Q11. Long term Patience	100	—
Receive $1,000 in 13 months	82	0.82
Receive $1,100 in 14 months	18	0.18
Time Preference 1	100	—
Impatient	77	0.77
Patient	7	0.07
Changed	16	0.16
Time Preference 2	100	—
Impatient	77	0.77
Changed or Patient	23	0.23
Q13. Deflation	99	—
False	62	0.626
True	37	0.374
Q14. Level of Education (completed or initiated)	101	—
Primary School or Less	42	0.416
Secondary School	32	0.317
Preparatory School	20	0.198
College or More	7	0.069
Q15. Marital Status	101	—
Single	16	0.158
Living Together, Not Married	19	0.188
Married	54	0.535
Divorced	8	0.079
Widower	4	0.04

Table 12: Descriptive Statistics and Distributions Questions 8-16: *Current* Group

Factor	Included	% Explained by	% Explained by	Weights	Weights
Time preferences	Question 10 short tanda toss	74,31%	100%	0,7246	-0,6891
	Question 11 long tanda toss			0,6891	0,7246
Cognitive ability	Level of education	99,99%	100%	0	-0,0005
	Deflation			0	0,0002
	Q12 Fin. Know.			1	-0,0007
	Q9 Baseball Quad 2			0,0007	1
Responsibility	Age	97,77%	98,70%	0,9999	-0,0006
	No of children			-0,0026	0,2315
	Marital status			0,007	0,8961
	No of children dependent			-0,0132	0,3754
	No of older dependents			-0,0026	0,0283
	No of dependents (others)			0,0014	-0,0409
Economic success	Employment status	58,75%	90,13%	0,9918	0,1015
	Cell phone			0,0333	-0,0546
	Landline			-0,0752	0,0168
	Home ownership			-0,0983	0,9932