## Problem Set 4

Please read and study KSG case study: "A Commercial Bank does MicroFinance" and answer the following question:

Sogesol used 28-day months, so that the "monthly" payment fell on the same day each time. Operationally this made sense because it meant that the credit officer could structure the loan so that the payment fell on the day when the borrower had cash in hand. But, this also raised the effective rate, and, as one credit officer pointed out, some borrowers did notice this. The table below shows how to calculate the effective rate, based on how Sogesol's program:

The profitability of Sogesol and other microfinance institutions was contingent on high interest rates. Were they too high? Construct the arguments for three different viewpoints about whether or not they are too high, each viewpoint based on a different ethical framework (Harper and Stein).
(answer should be one page or less, 12 point font)
Answers DUE Friday December 5 ${ }^{\text {th }}$, 5PM
Sogesol Effective Interest Rate Charges

|  | A | B |  |  |
| ---: | :--- | ---: | :--- | :--- |
|  |  | 4-month loan |  |  |
| $\mathbf{4}$ | amount to borrower | $\$ 1,000.00$ |  | Amount disbursed to borrower |
| $\mathbf{5}$ | Loan amount | $1,036.27$ |  | Amount that borrower signs for |
| $\mathbf{6}$ | Term in 28-day months | 4 |  |  |
| $\mathbf{7}$ | \# of 28-day months in 360-day year | 13 |  |  |
| $\mathbf{8}$ |  |  |  |  |
| $\mathbf{9}$ | monthly interest rate | $3.50 \%$ |  |  |
| $\mathbf{1 0}$ | monthly payment (flat balance) | $\$ 295.34$ |  | $($ B5 + B6 * B9 * B5)/B6 |
| $\mathbf{1 1}$ |  |  |  |  |
| $\mathbf{1 2}$ | Commission Rate | $3.50 \%$ |  |  |
| $\mathbf{1 3}$ | Installment fee | 0 |  |  |
| $\mathbf{1 4}$ |  |  |  |  |
| $\mathbf{1 5}$ | Effective monthly rate | $7.02 \%$ |  | Excel formula: RATE(B6, B10, B4* -1$)$ |
| $\mathbf{1 6}$ | Effective annual rate based on 28-day month | $90.21 \%$ |  | B15 * B7 |
| $\mathbf{1 7}$ | Effective annual rate on calendar month | $84.20 \%$ |  | B15 * 12 |
| $\mathbf{1 9}$ | Compounded annual rates |  |  |  |
| $\mathbf{2 0}$ | Effective annual rate based on 28-day month | $139.13 \%$ |  | $(1+\mathrm{B} 15)^{\wedge} \mathrm{B} 7-1$ |
| $\mathbf{2 1}$ | effective annual rate on calendar month | $125.63 \%$ |  | $(1+\mathrm{B} 15)^{\wedge} 12-1$ |

