

# Defining some key metrics from Kiva's datasets

## Objective

The analysis seeks to define key metrics that inform Kiva's organizational KPIs

## Metrics that can be defined from the existing datasets

### Loan growth rate metric

I have chosen this metric as it helps the organization understand and track the performance of its lending activities.

#### PROS

- The tracking of its loan growth rate will help Kiva track its lending goals and achievements for certain periods
- This metric will help Kiva identify periods when the borrowing rate is highest and lowest, enabling them to understand their clients further
- The loan growth rate metric will also help Kiva keep tabs on its business expansion or decline

#### CONS

- This metric is subject to external economic conditions such as inflation, which are not taken into account in this analysis making it quite unreliable
- This metric also increases risk for Kiva as the high loan growth rate as seen in March 2017 and May 2017 is followed by a sharp decline making it less reliable in identifying a sustainable lending model

### Loan repayment intervals per gender metric

This metric identifies the frequency of loan repayments from borrowers based on gender.

#### PROS

- The loan repayment intervals per borrower gender metric will help Kiva understand the needs of its borrowers and help inform the financial products suitable for each group
- Based on the repayment intervals, Kiva can understand the lending risks associated with each gender, helping them improve their lending decisions

#### CONS

- This metric does not take into account the other factors that may be influencing the repayment behaviors of the genders making it incomplete to use on its own
- This metric may inform biased lending practices leading to unfair treatment of some borrowers

## **ANALYSIS OF THE LOAN GROWTH RATE METRIC**

The available data covering January 2014 to July 2017 provides insights into Kiva's business growth rate and the effectiveness of its loan lending practices.

**Period with the lowest loan growth rate** - By taking into account the loan amounts disbursed per month, Kiva can identify January as its slowest month based on the low lending rates witnessed in January in 2014, 2015, 2016, and 2017.

**Period with the highest loan growth rate** -The analysis also Identifies March as a month that sees Kiva experience a high loan growth rate for the four years under consideration, with March 2017 having the highest growth rate by recording total loans of over 22,500.

Kiva also experienced an abnormally sharp increase in lending rates in May 2017 followed by an even sharper decline in July 2017, which were not witnessed in the preceding years and would require further data analysis to understand.

However, this metric on its own would provide a biased outlook of Kiva's lending business as it does not account for factors such as interest rates, currencies, and regions, all of which are elements in the dataset used. Further, it does not account for risks such as loan defaults and repayment periods which affect lending rates, making it less reliable. In addition, focusing solely on increasing loan amounts may lead to long-term financial instability for Kiva.

This metric requires regular monitoring over long periods to better understand the effectiveness of Kiva's business model and identify trends in the data that would require Kiva to make strategic decisions and adjustments.

## **RECOMMENDATIONS**

Based on the above analysis, I would provide the above recommendations to Kiva;

- Maximize the lending period of March, which experiences a sharp increase in the total amount of loans disbursed, to reach as many clients as possible. This involves a deeper understanding of the seasonal variations of the lending rate. During this peak period in lending, Kiva should avail sufficient resources to handle the increased number of loan applications.
- Kiva should streamline its loan processes to curb the fluctuations in the loan growth rate across the various months and years. The fluctuations in loan growth rates could indicate inefficiencies in Kiva's loan processes, which can be addressed by adopting new technologies and training its staff, regularly on loan processes.
- Enhance its marketing efforts to help smooth out the inconsistent loan growth rates experienced by the company. Kiva should invest in marketing strategies that target customers throughout the year to reach a wider audience.

## **ASSUMPTIONS MADE DURING THE ANALYSIS**

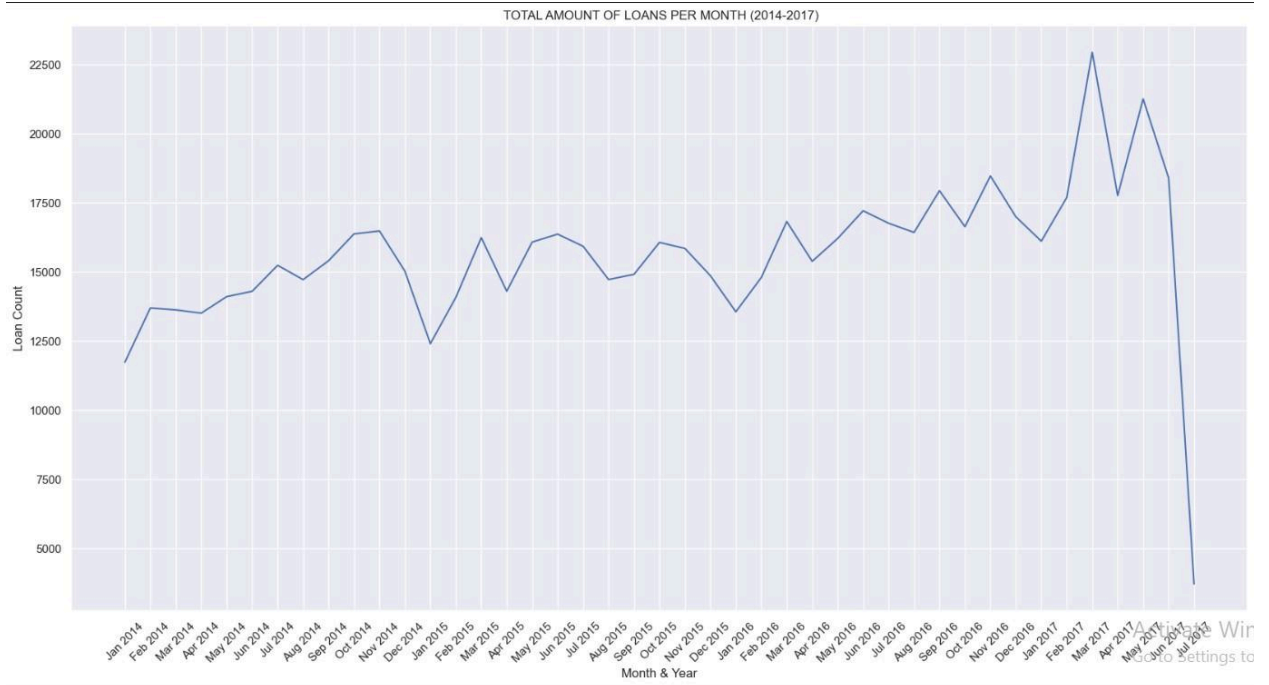
- The sample data used is a true representation of the affected population

## **LIMITATIONS OF THE DATASETS USED**

- I had to exclude some null values from the provided datasets as they would affect the accuracy of my analysis
- The analysis involved multiple datasets making analyzing the data more complex leading to an extended deadline.

## APPENDIX 1

### The visualization that informed the loan growth rate metric analysis



### Link to the notebook used for the analysis

<https://github.com/Bernadine05/Kiva-Crowdfunding-analysis/blob/main/Assets/Notebook/Kiva%20Crowdfunding%20Analysis%20Notebook.ipynb>