

Kiva Data Delving

CDT Colin Fisk (2014)

CDT Evan Hansen (2015)

What We Know

- Microfinance works as an institution.
- It is growing at a high rate.
- There are still many questions relating to its affect of poverty alleviation

Thematic Questions

- Are Individual loans riskier than Group Loans?
- Is lending to members of a certain sex riskier than lending to another?
- Are rates of default truly as low as advertised?
- Which sectors tend to be repaid more?
- Do higher loan amounts lead to higher default rates?
- Could certain countries be unsuitable for microfinance? And Why?

Our Data Sets

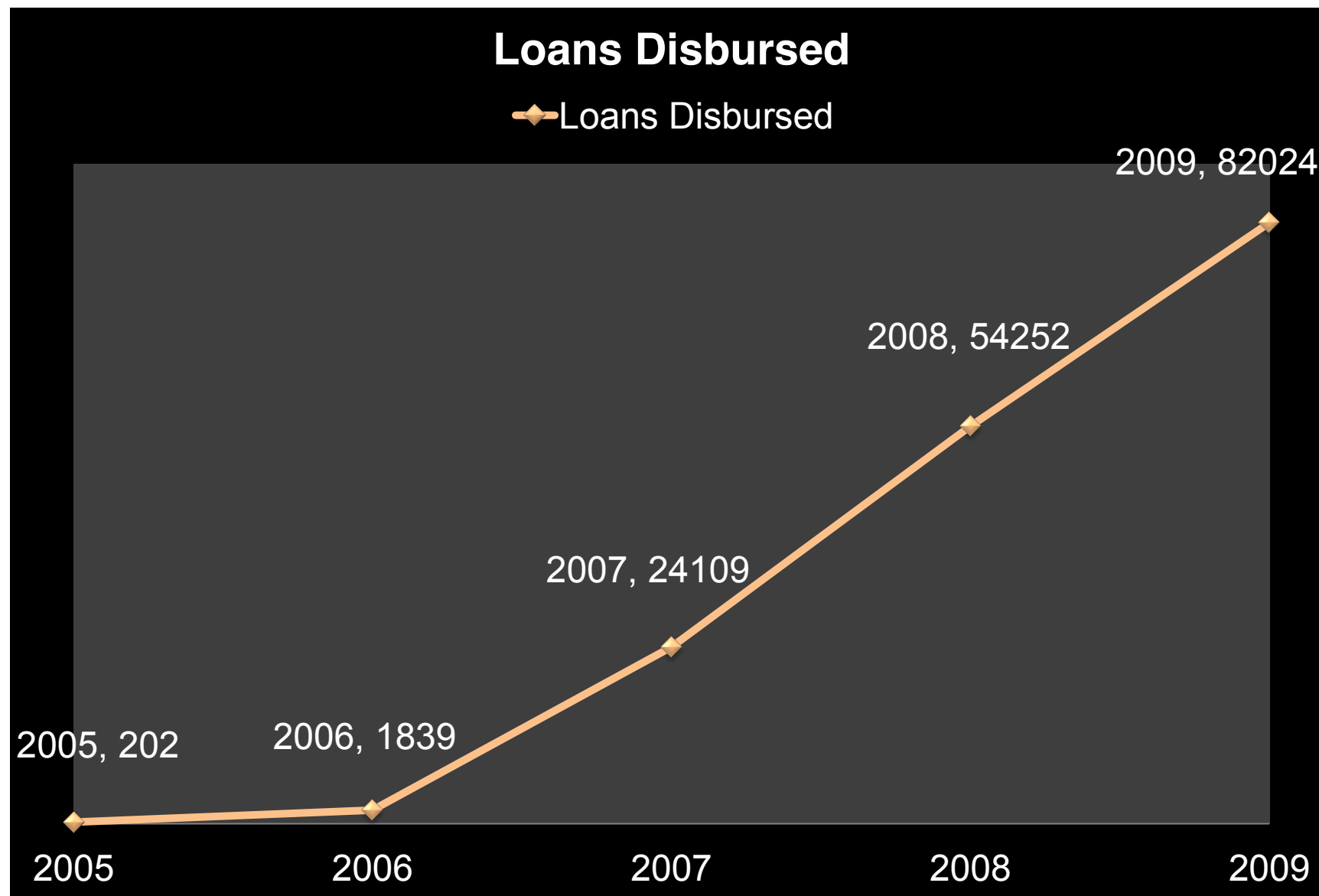
Kiva Data Set

- Loan ID
- Country
- Amount
- Sector
- Status
- Sex of Borrower
- Date of Loan

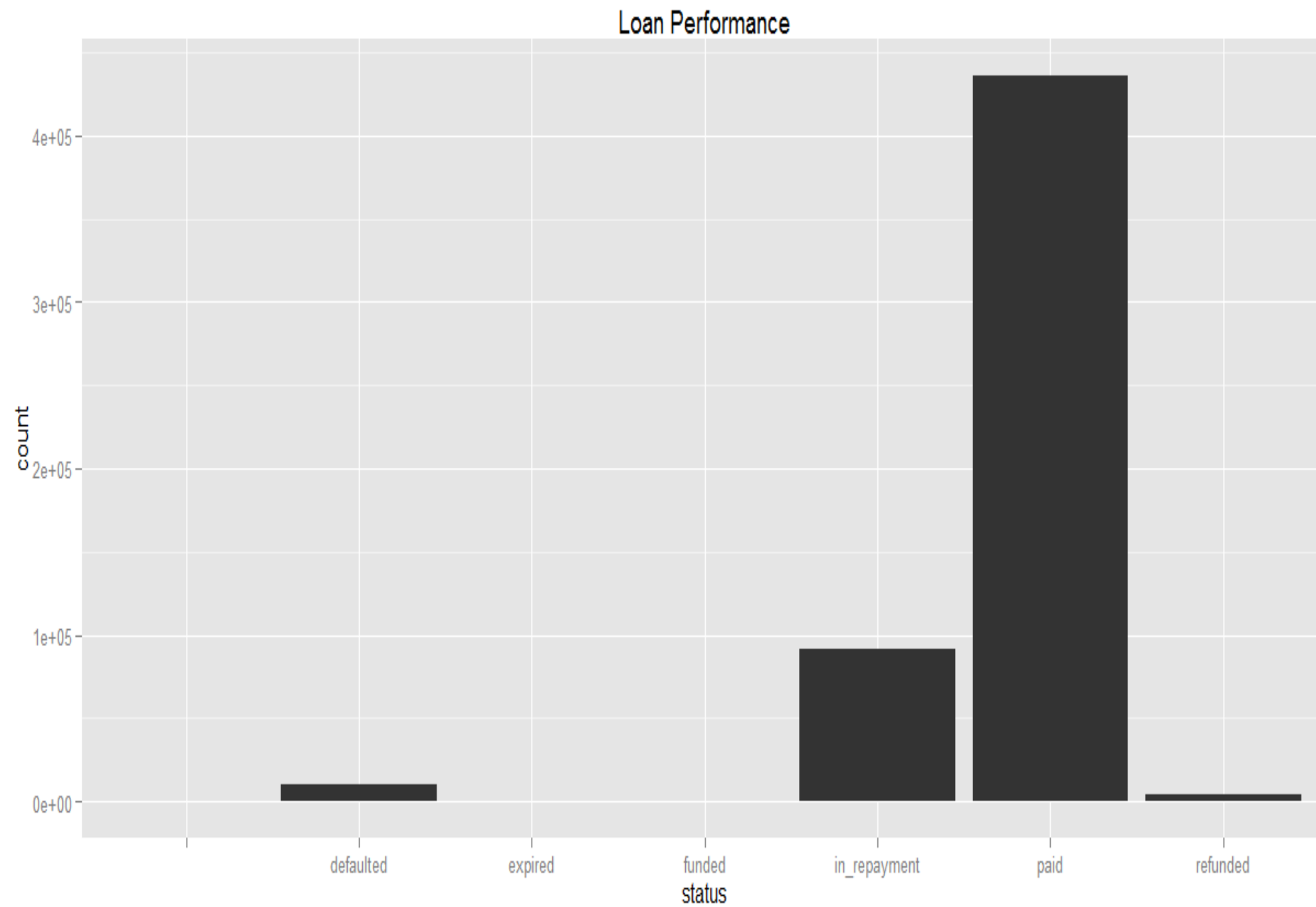
Kiva Data Subset

- Includes in addition to previous data the subset includes **default dates**
- This data is still significant as it contains over 150,000 entries (30% of the total data set)

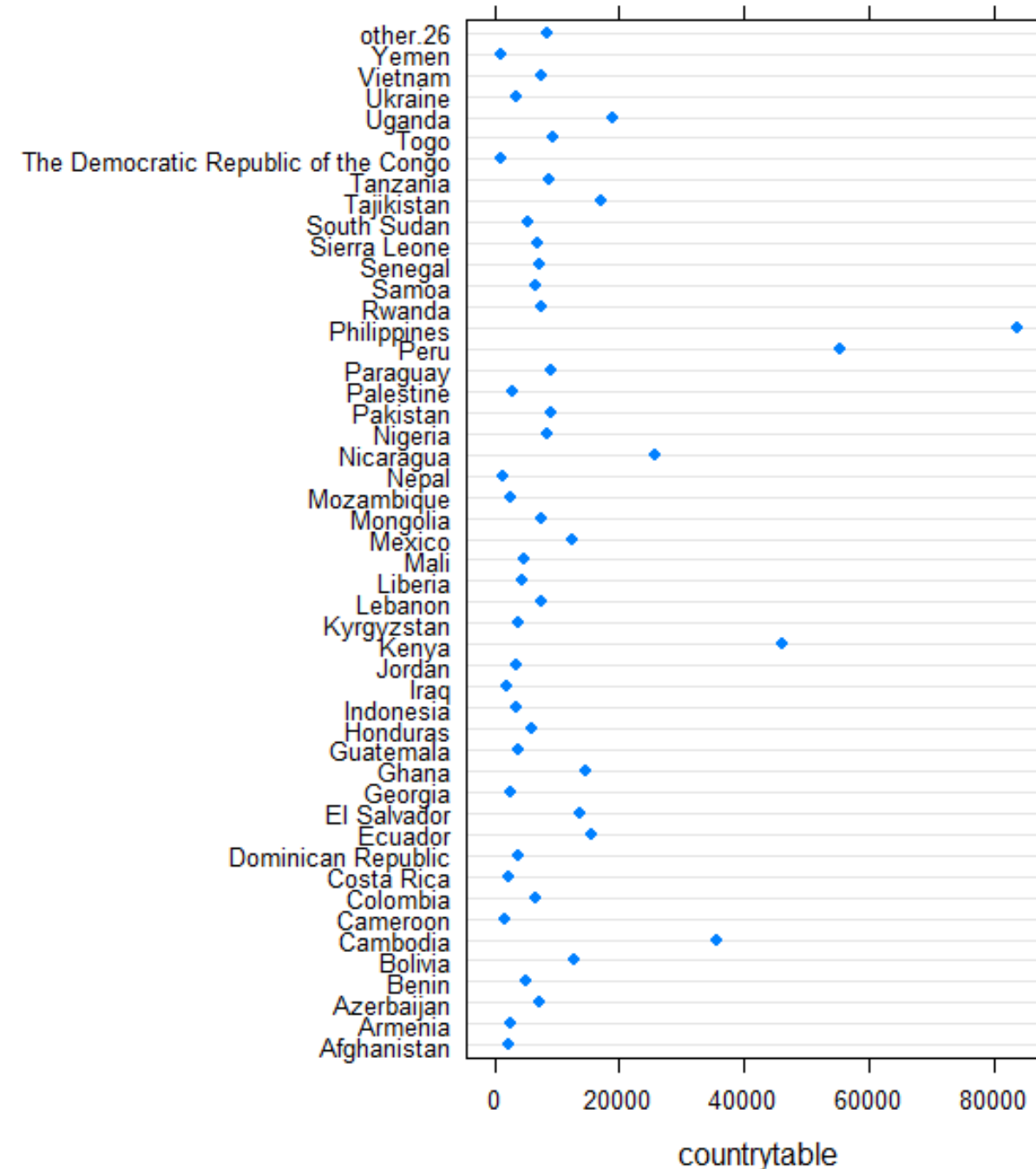
Growth of Kiva



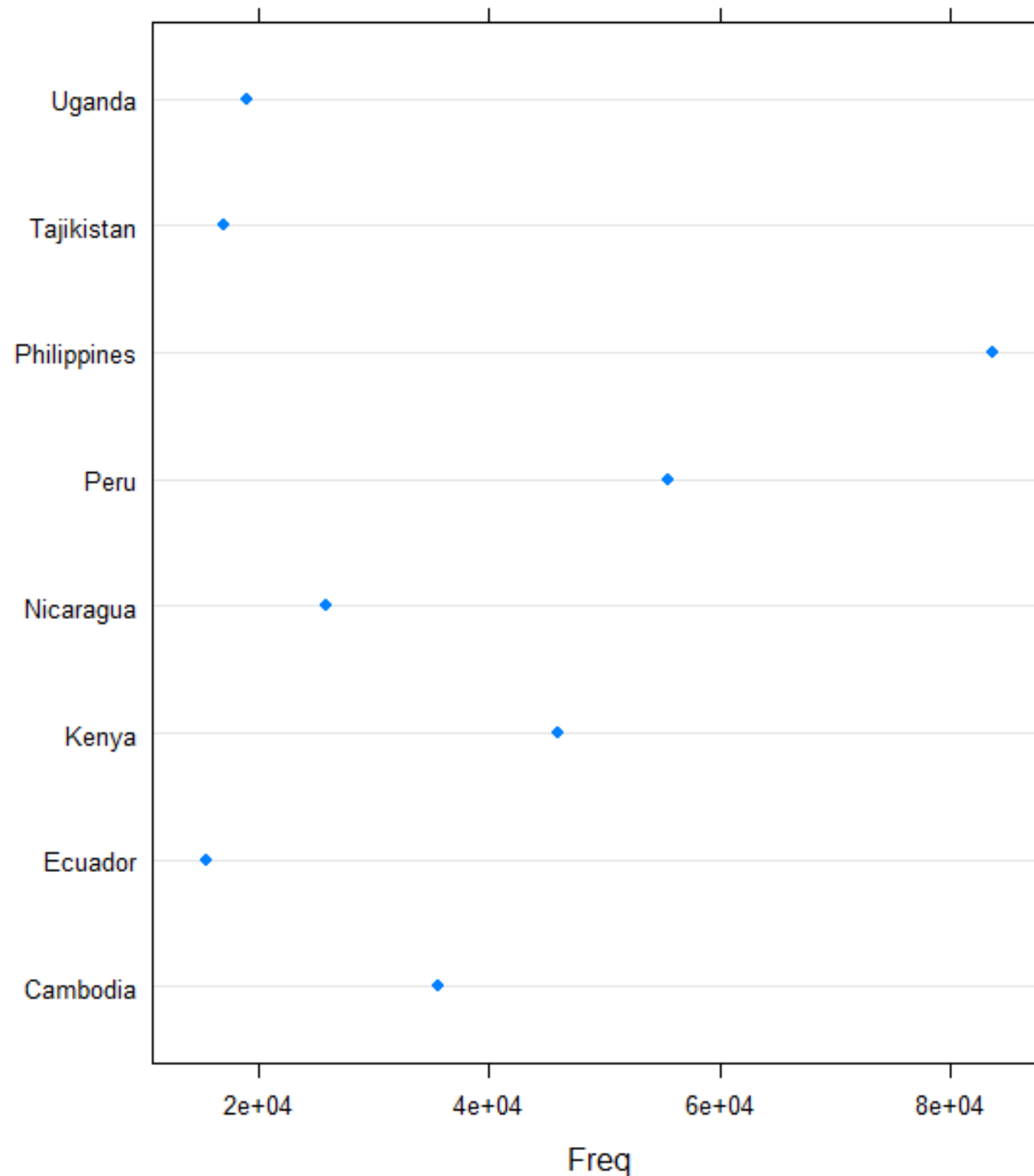
Loan Performance



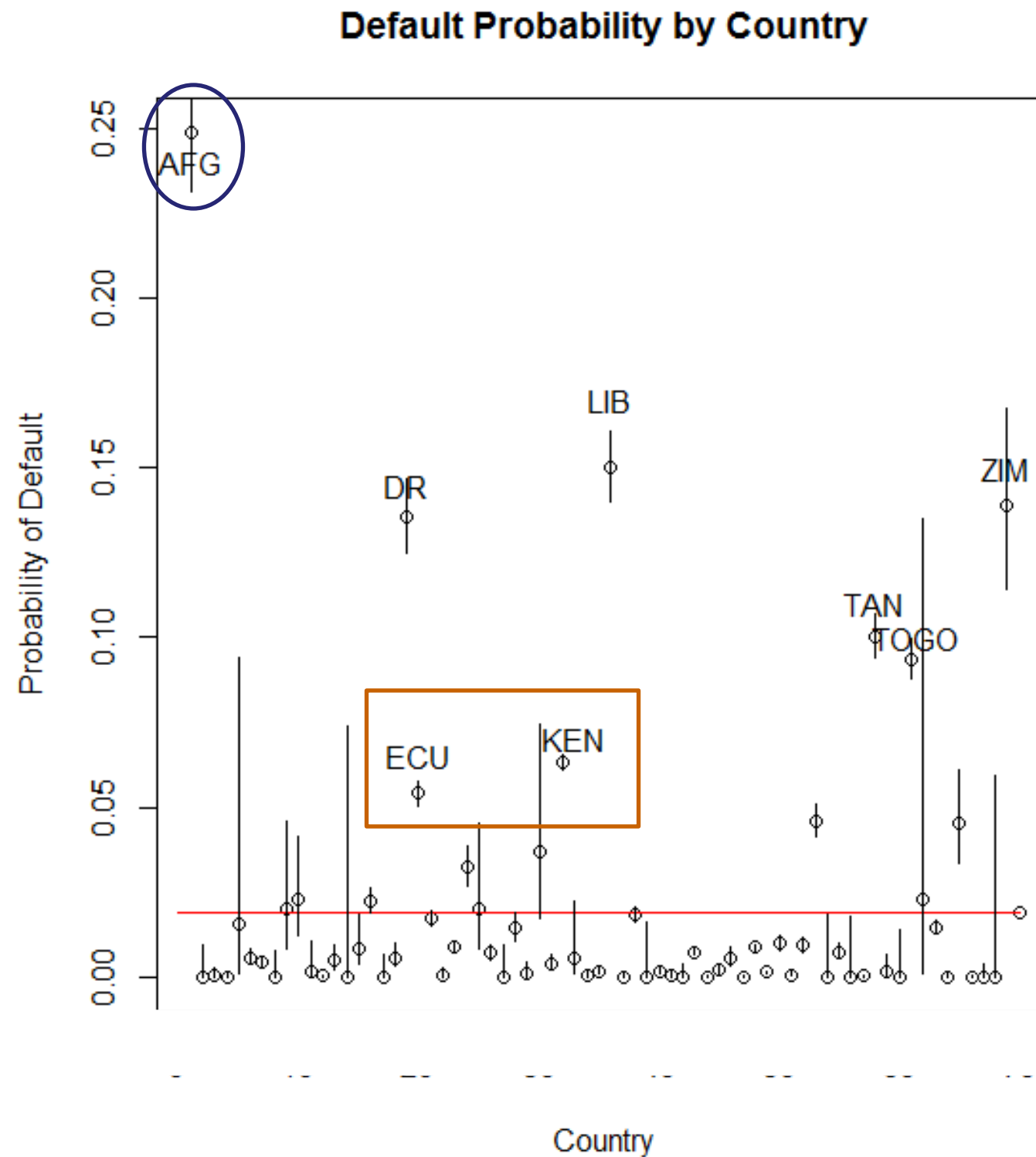
Amount of Loans per Country



Countries Greater Than 15,000 Loans



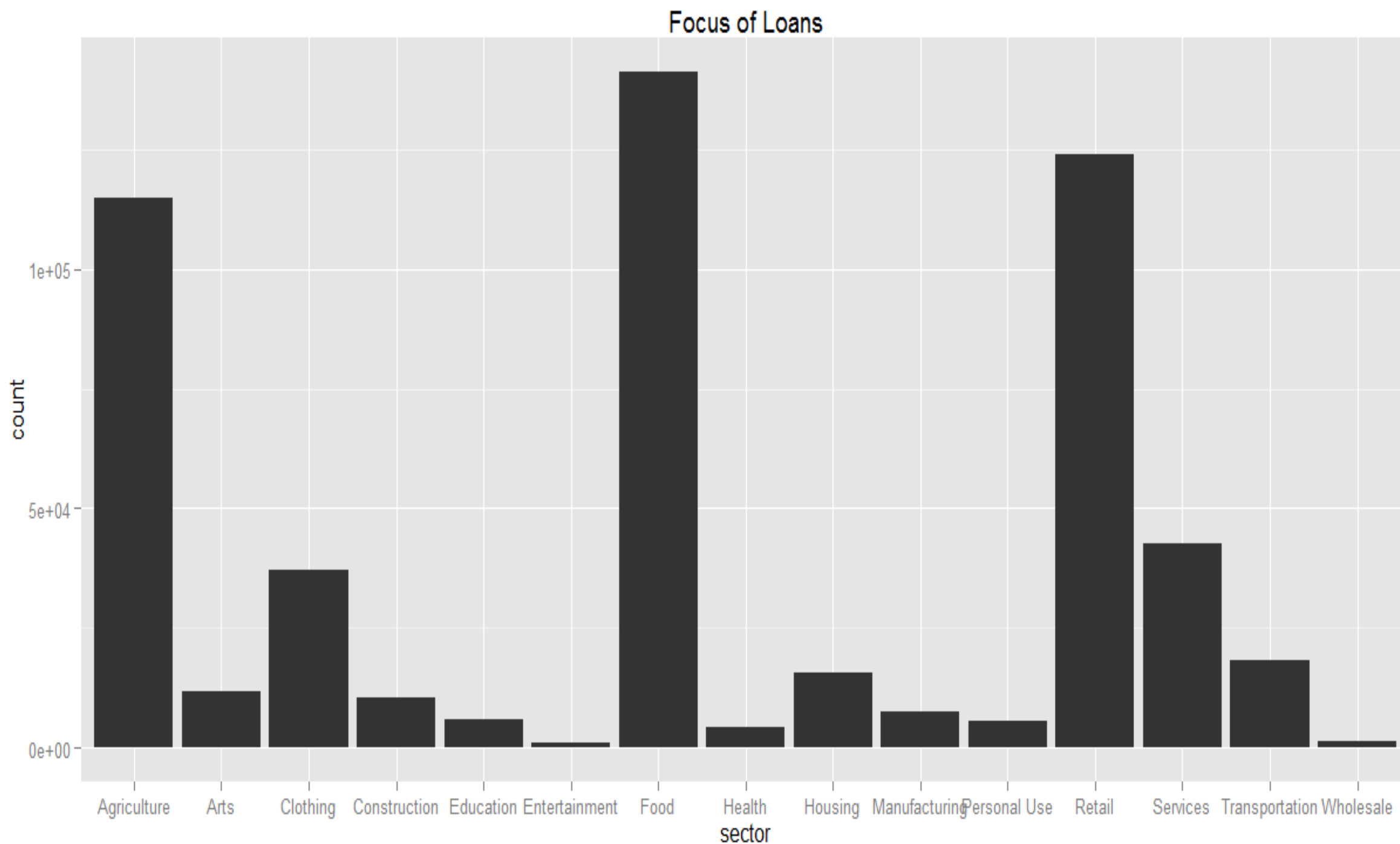
Default Probability by Country



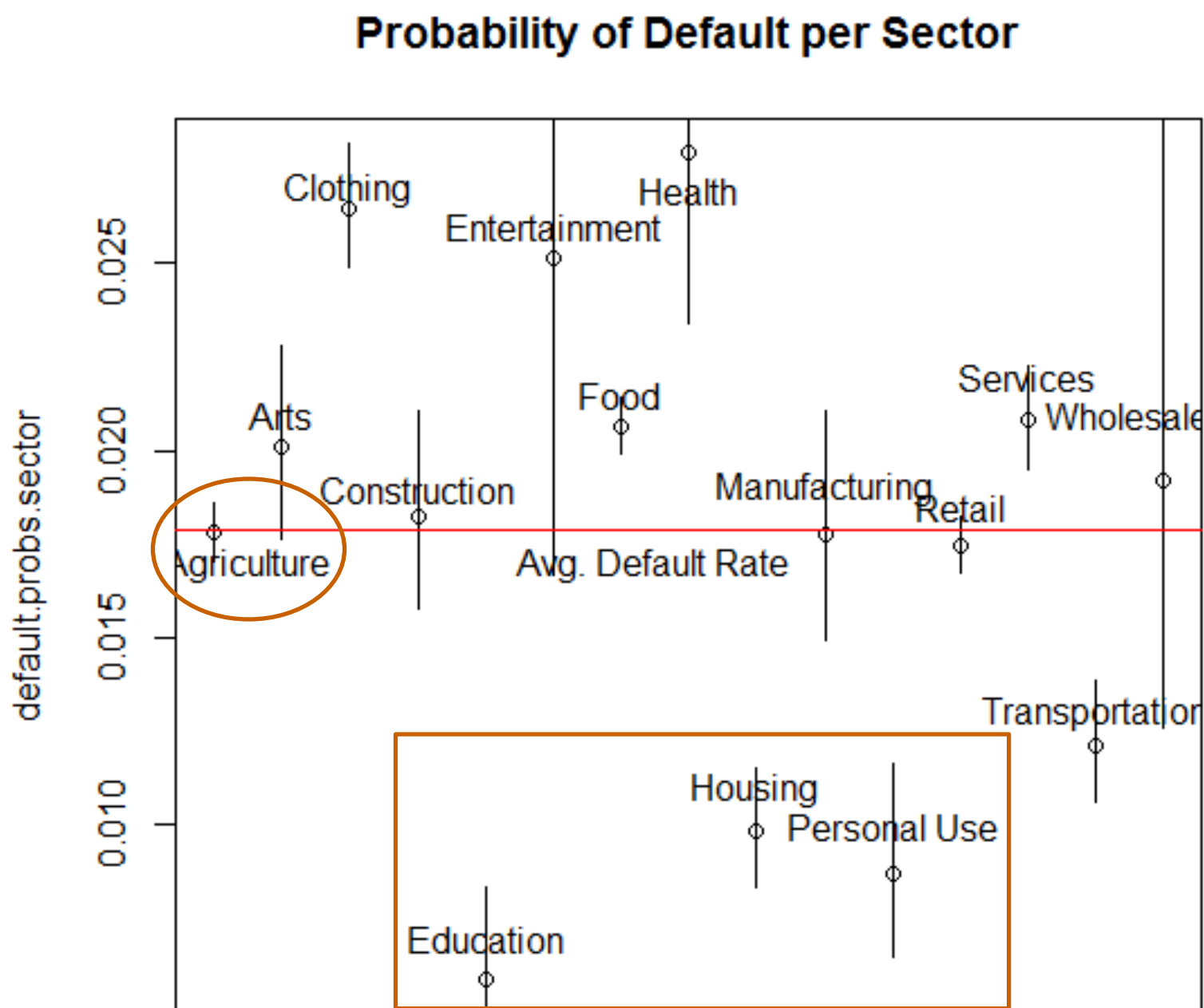
Microfinance and the Military

- If it does work as a poverty alleviation tool, then the military is interested in employing MFI techniques to post combat environments
- Afghanistan's high default rate
- Initial look: maybe we should prioritize other stabilizing activities

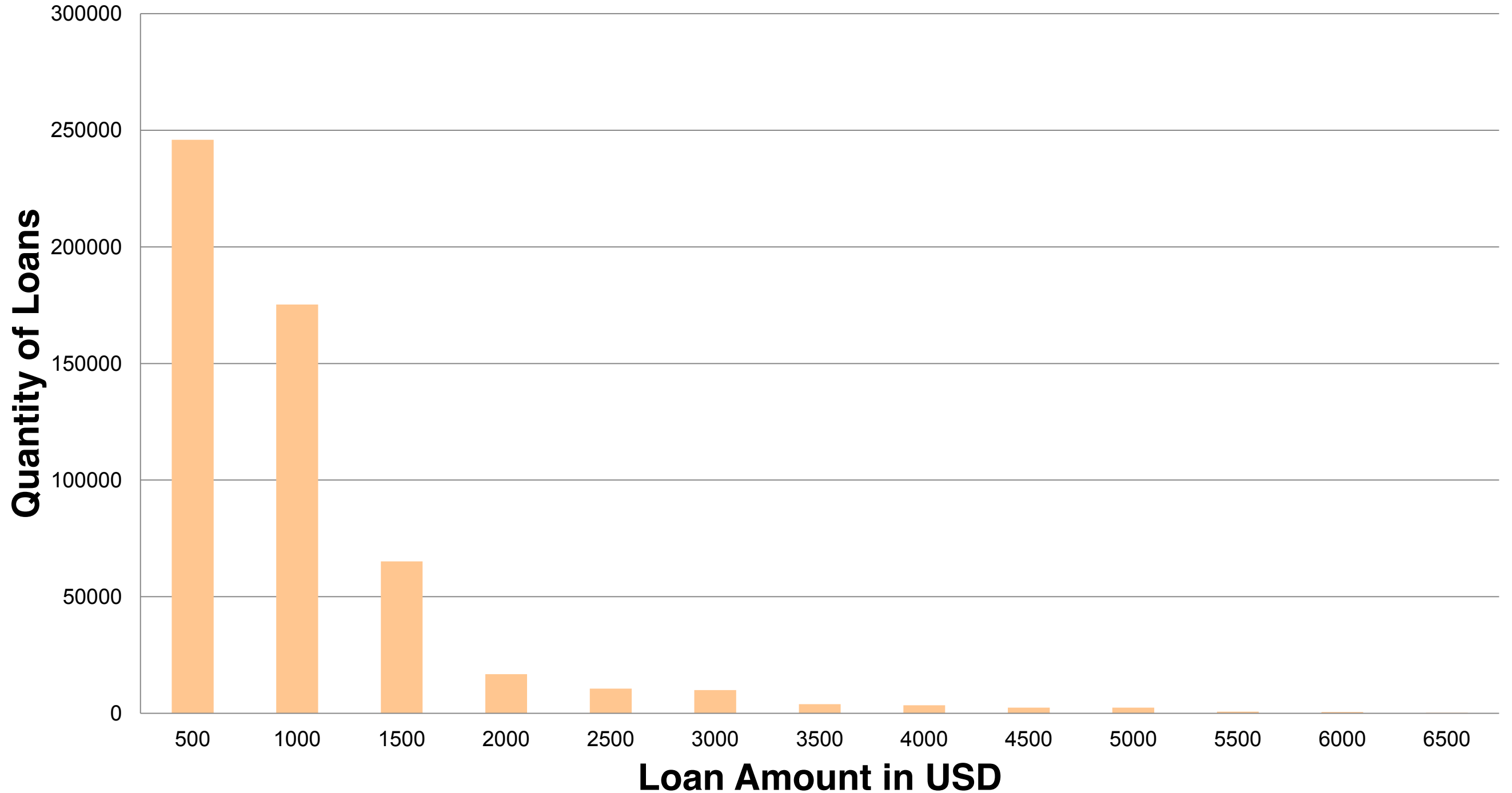
Data Tactics Analytics Practice



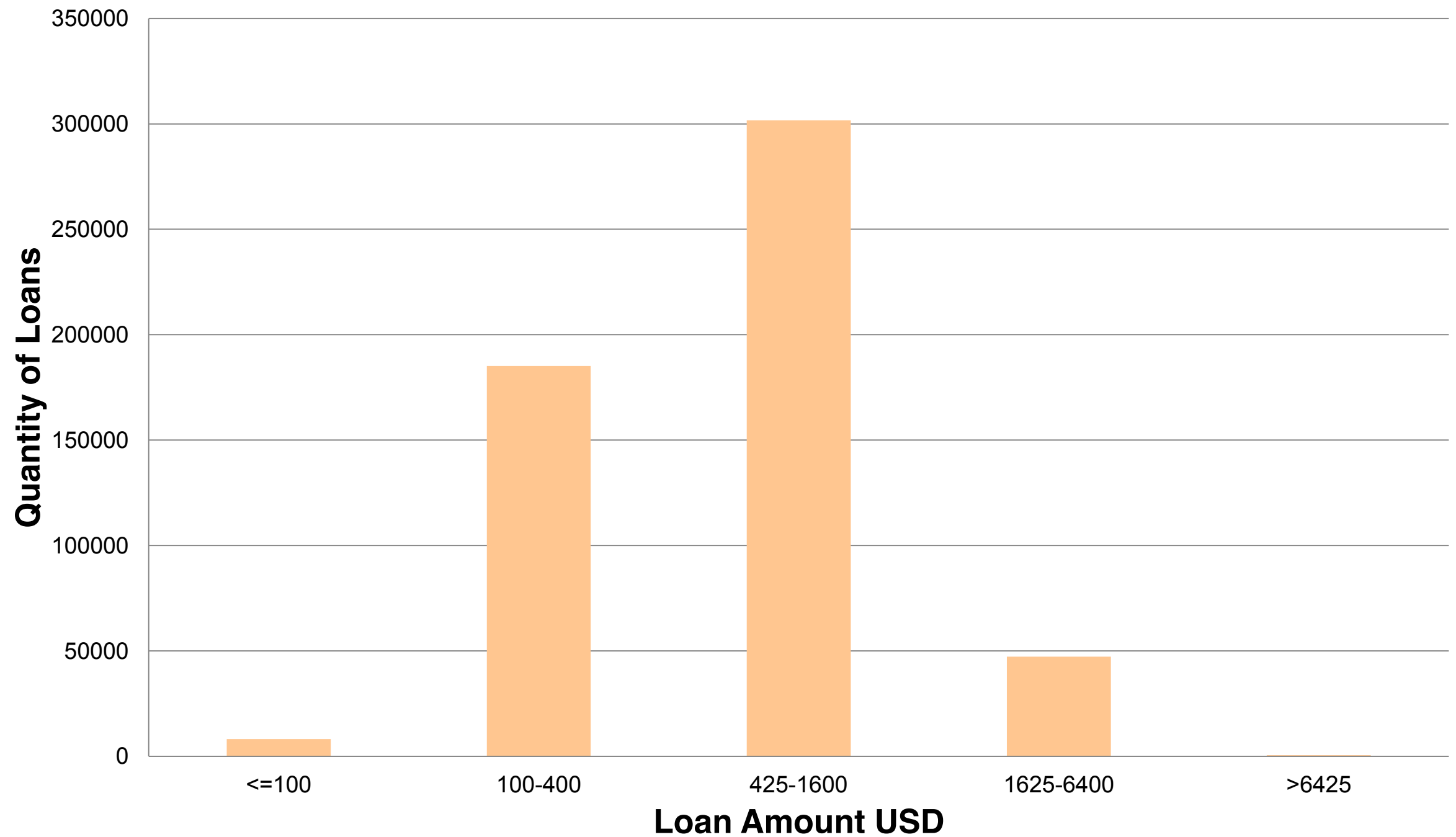
Data Tactics Analytics Practice



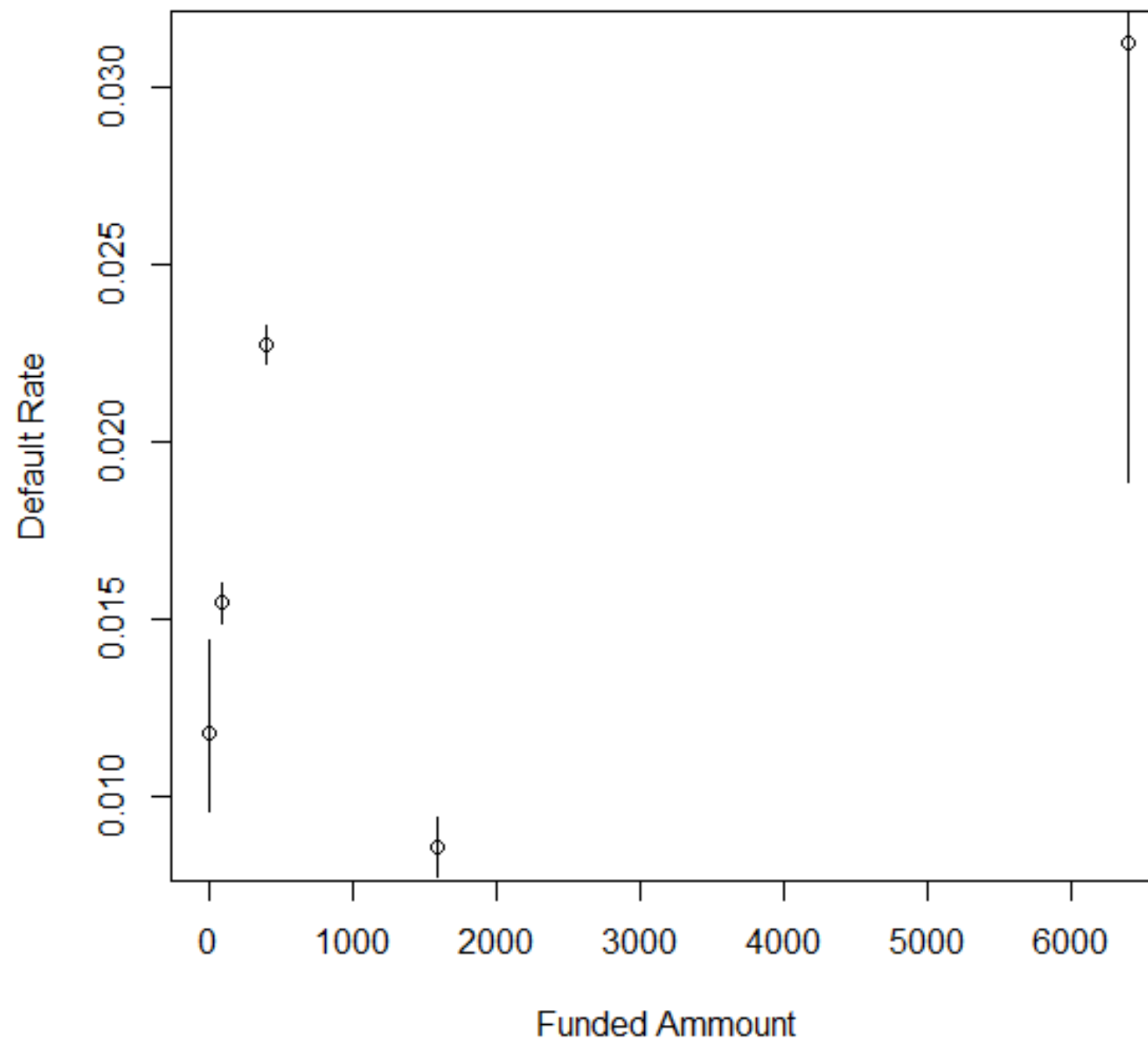
Loan Frequency by Fund Amount



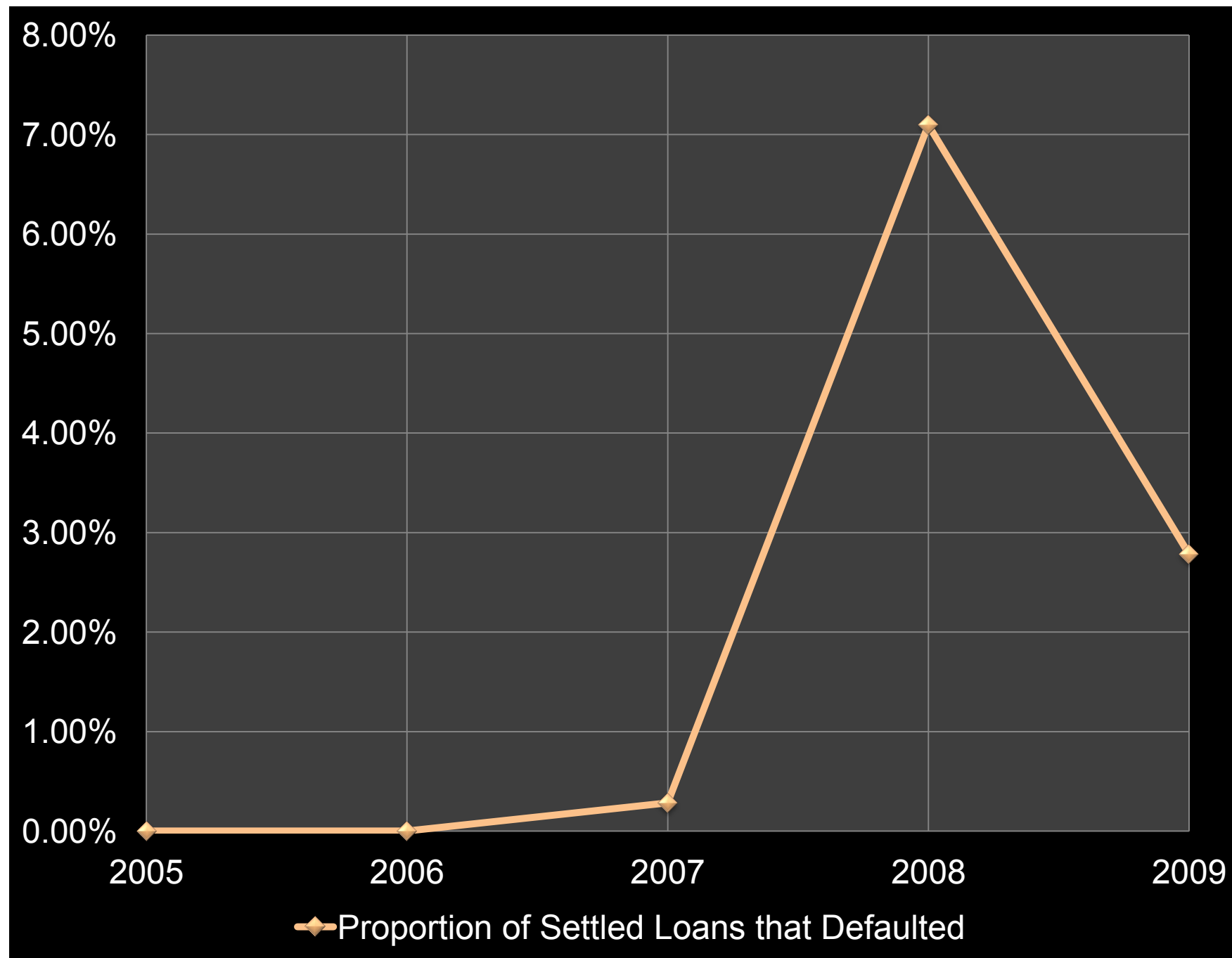
Frequency of Loan Amount



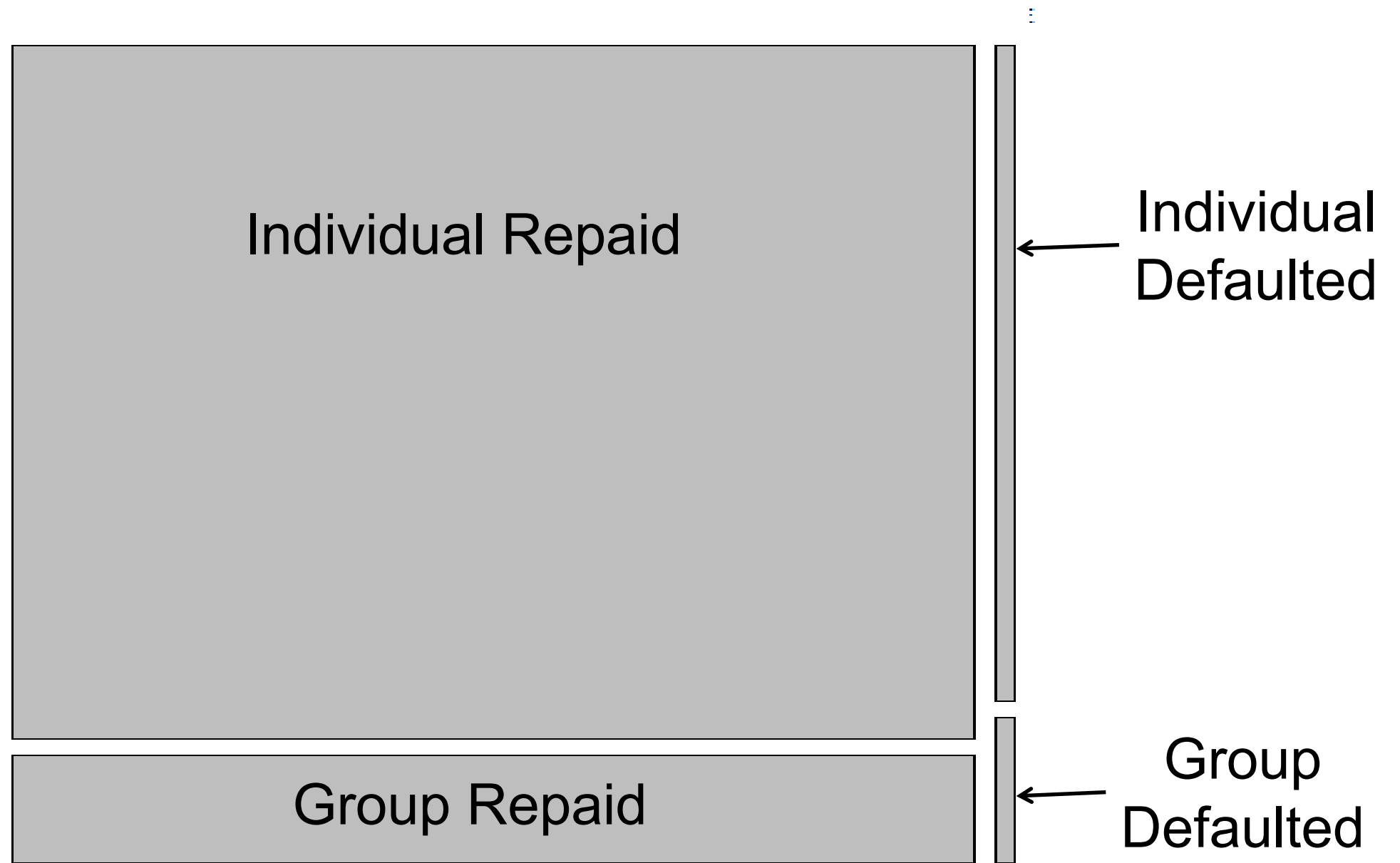
Fund Amount by Default Rate



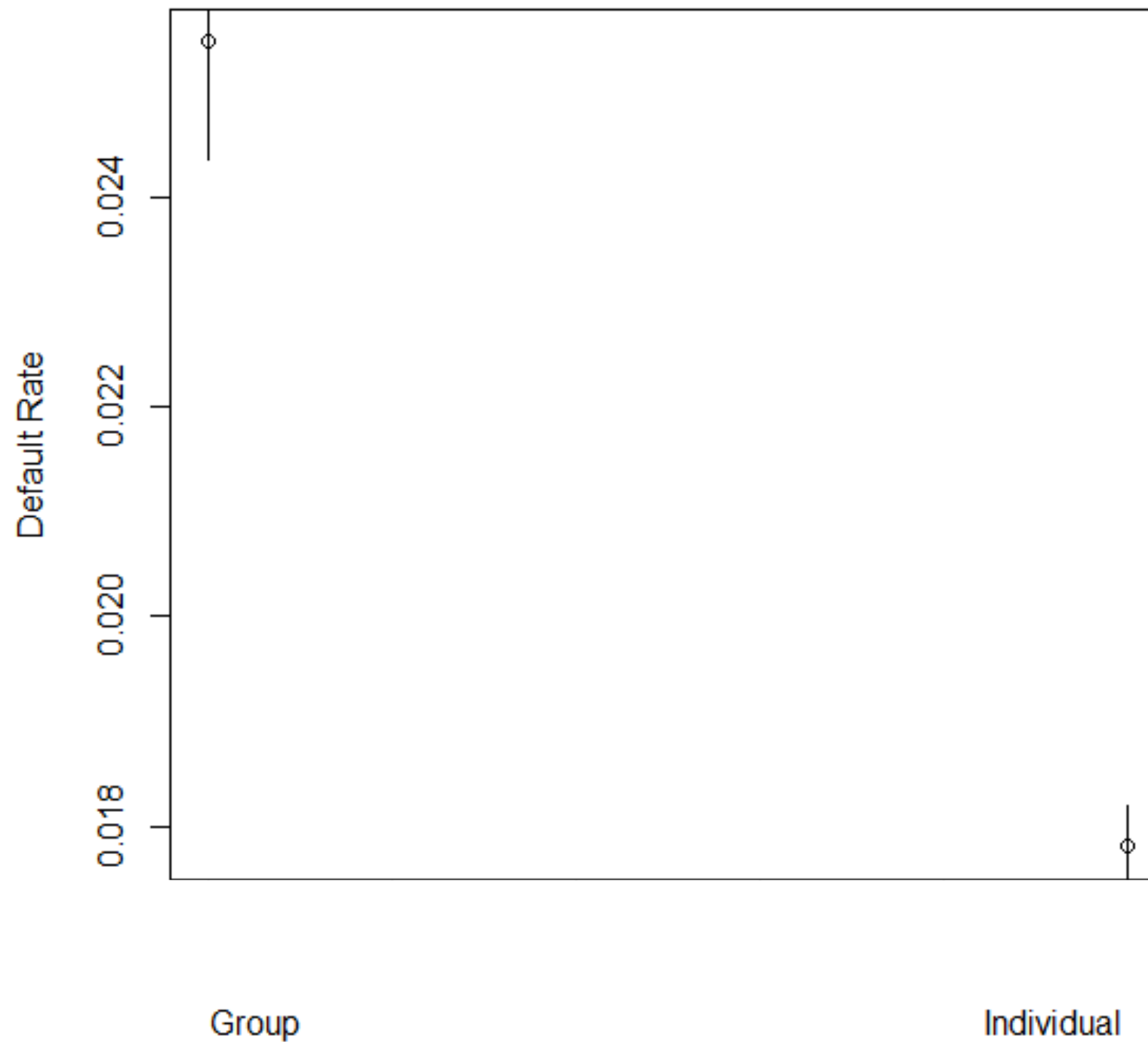
Proportion of Settled Loans that Defaulted



Group V. Individual

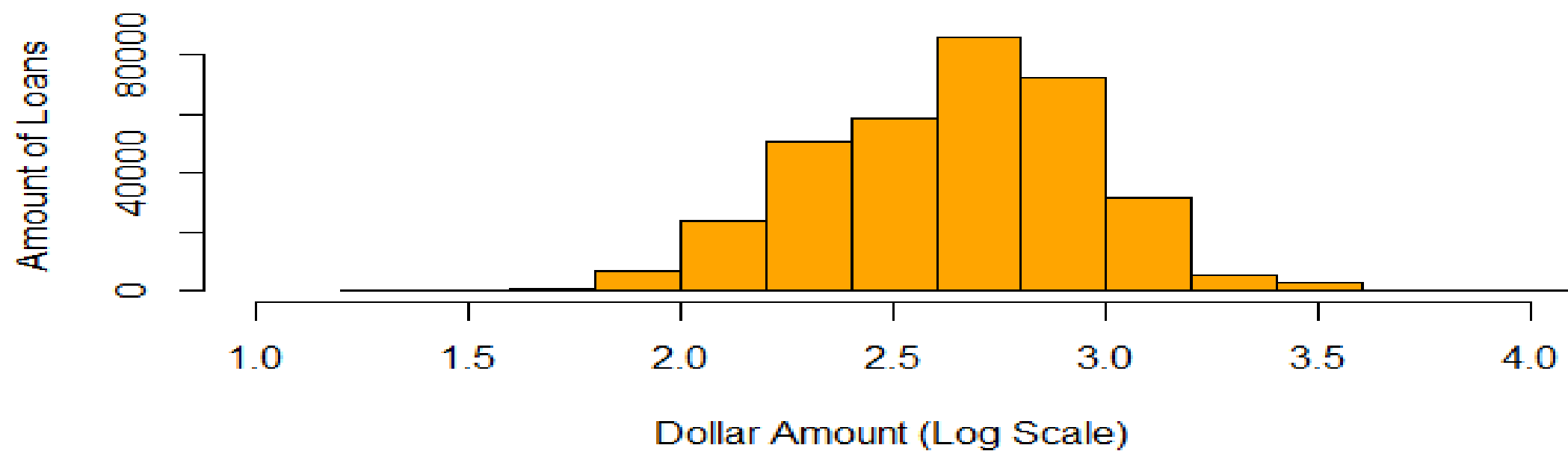


Group V. Individual

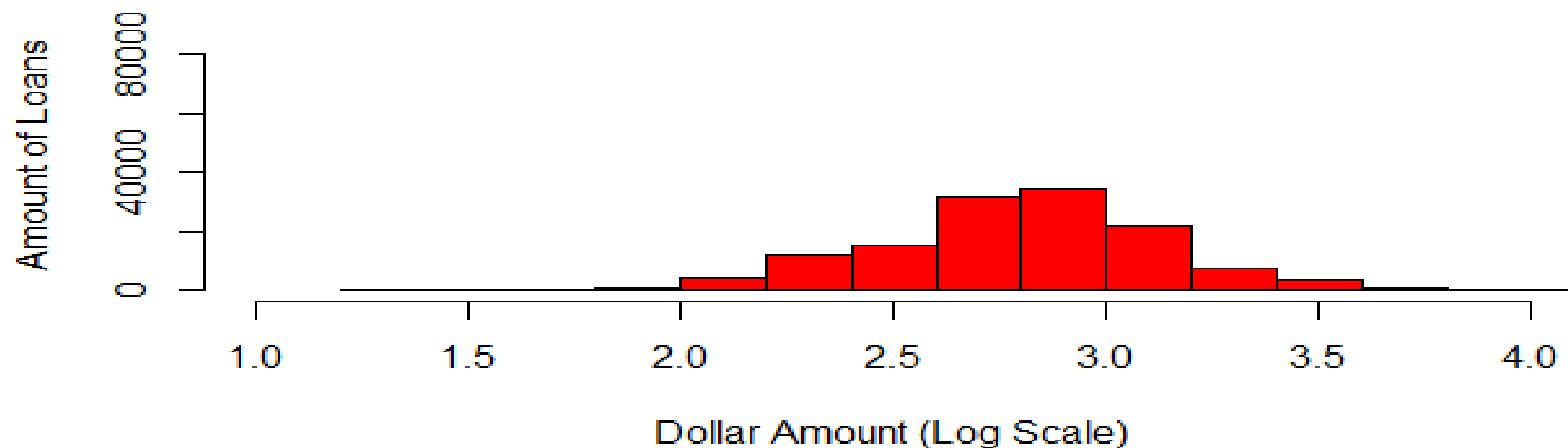


Battle of the Sexes

Loan Size Given to Females

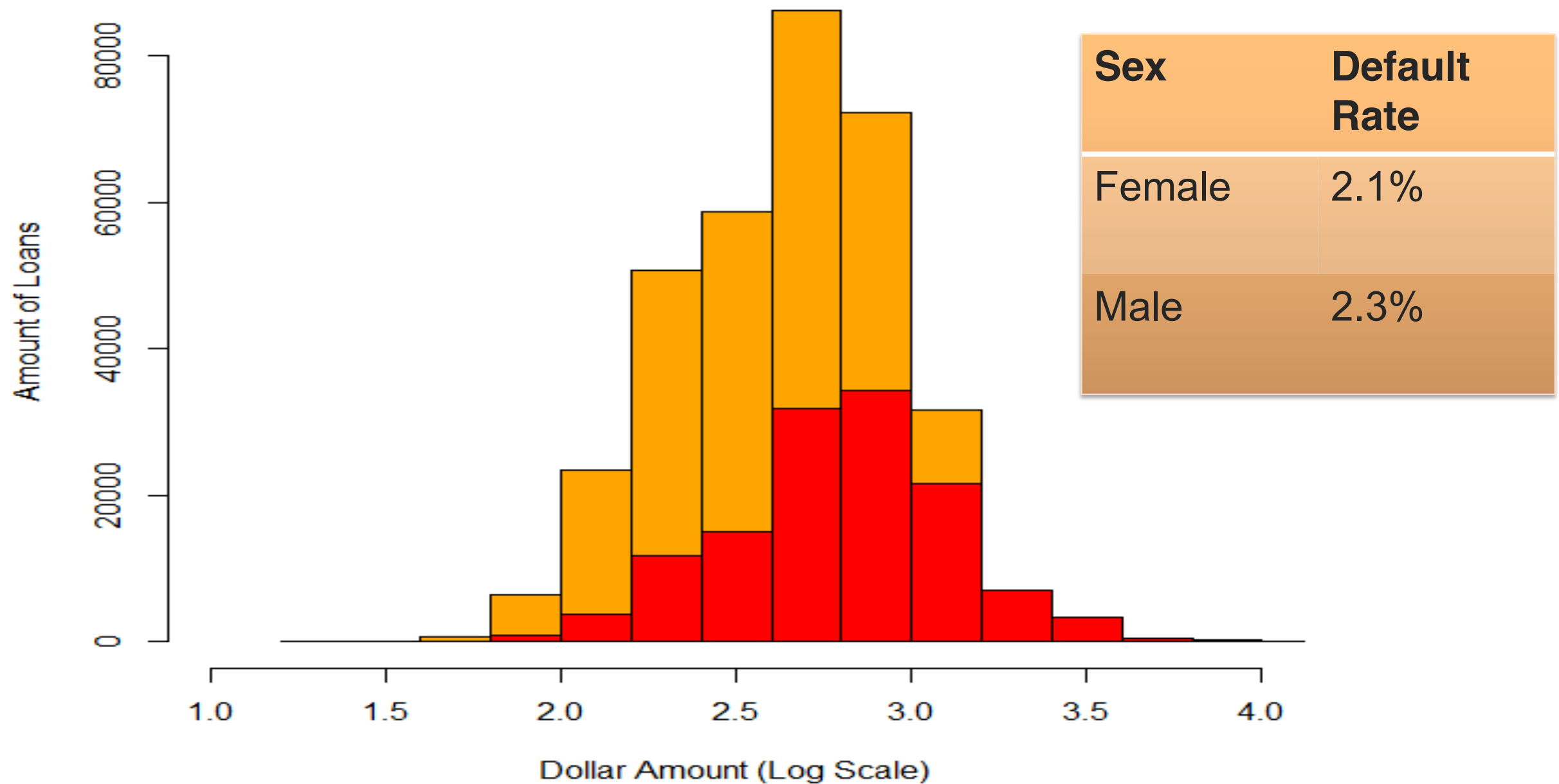


Loan Size Given to Males



Battle of the Sexes

Loan Size Given by Sex



Future Investigations

- Poverty alleviation tools – Home indices, returning borrowers, etc...
- Correlation of performance to interest rates
- Tailoring an MFI structure for the military
- Looking at specific socio-economic or political shocks that effect loan status

Inquiries?
