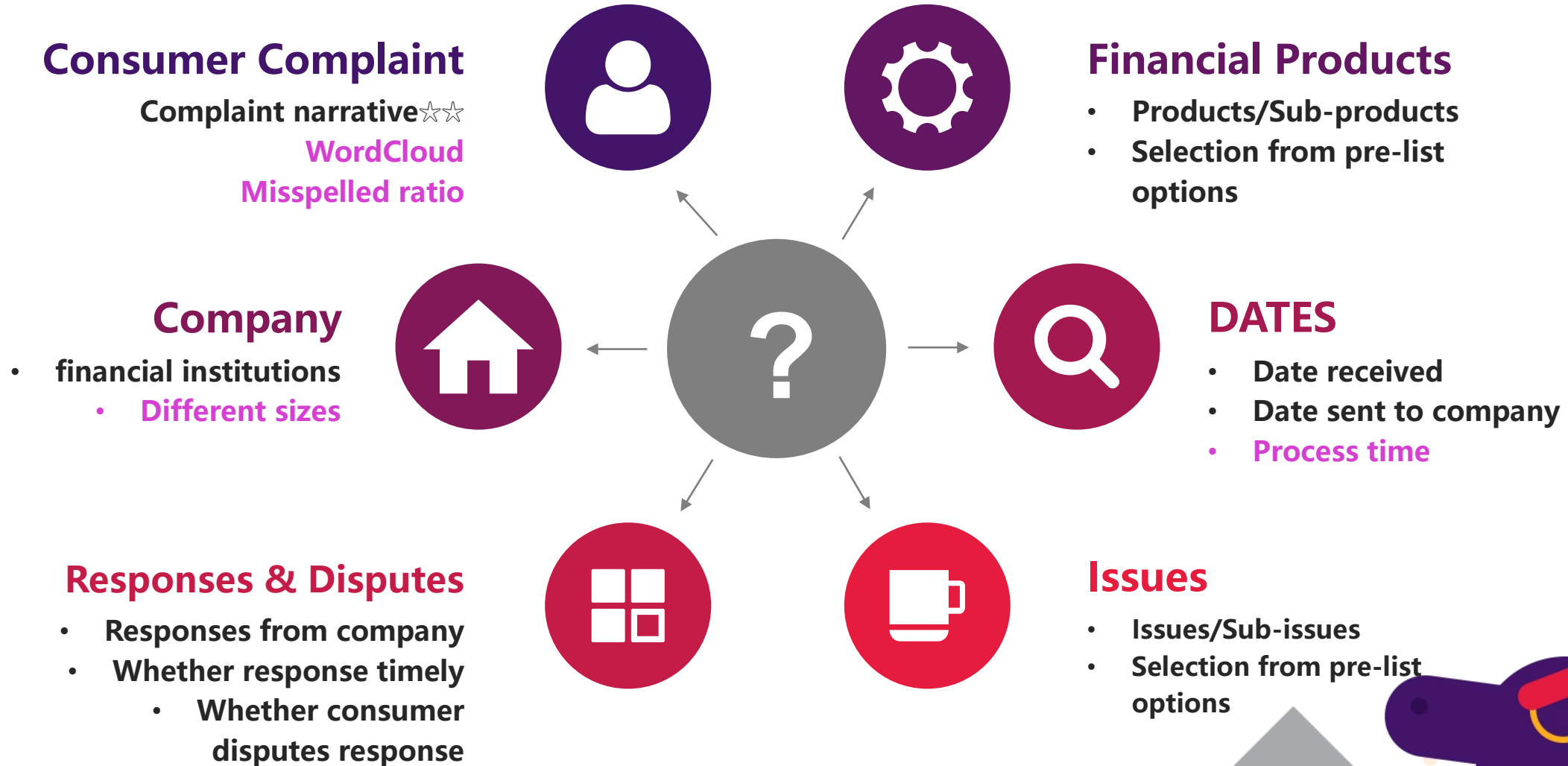


●✕ Group 3 2507/3802

Exploring with Python Consumer Complaints



- [Consumer Complaints Database](#) (Raw data length: 903983)
- Which is collected from [CFPB database](#)





01

Why a complaint is more likely to result in a dispute?

-Classification

-Student loans

Response with
no relief
nor explanation

Company response
to consumer:
closed

Company
with
smaller size

Company size:
companies in <=25
states of US

Value from
Decision
Tree

Dispute rate:
0.964

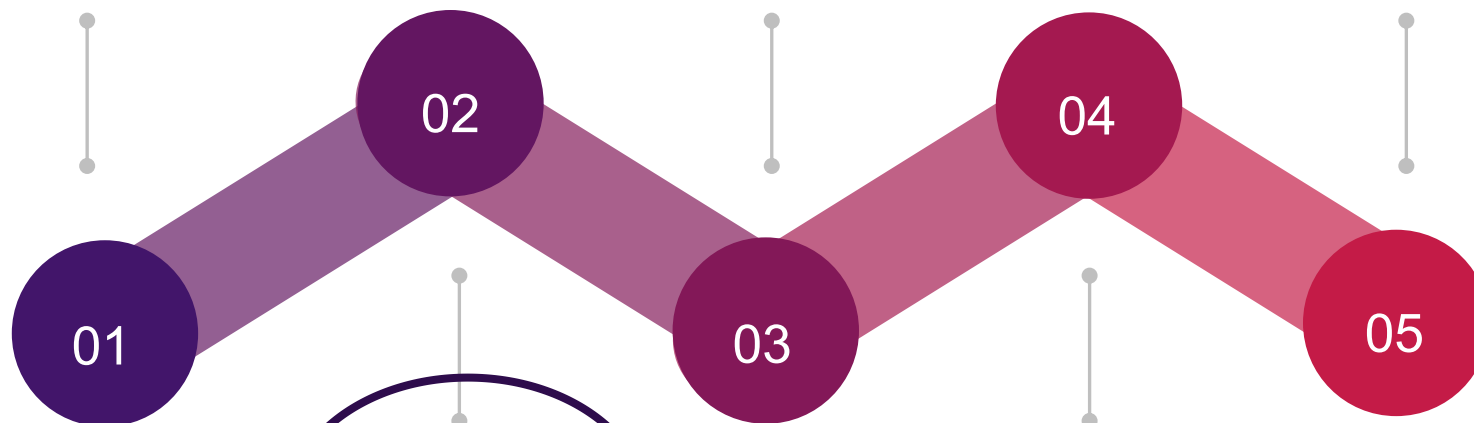


Decision Tree
Regressor

~

WHETHER
DISPUTE
THE COMPANY'S
RESPONSE

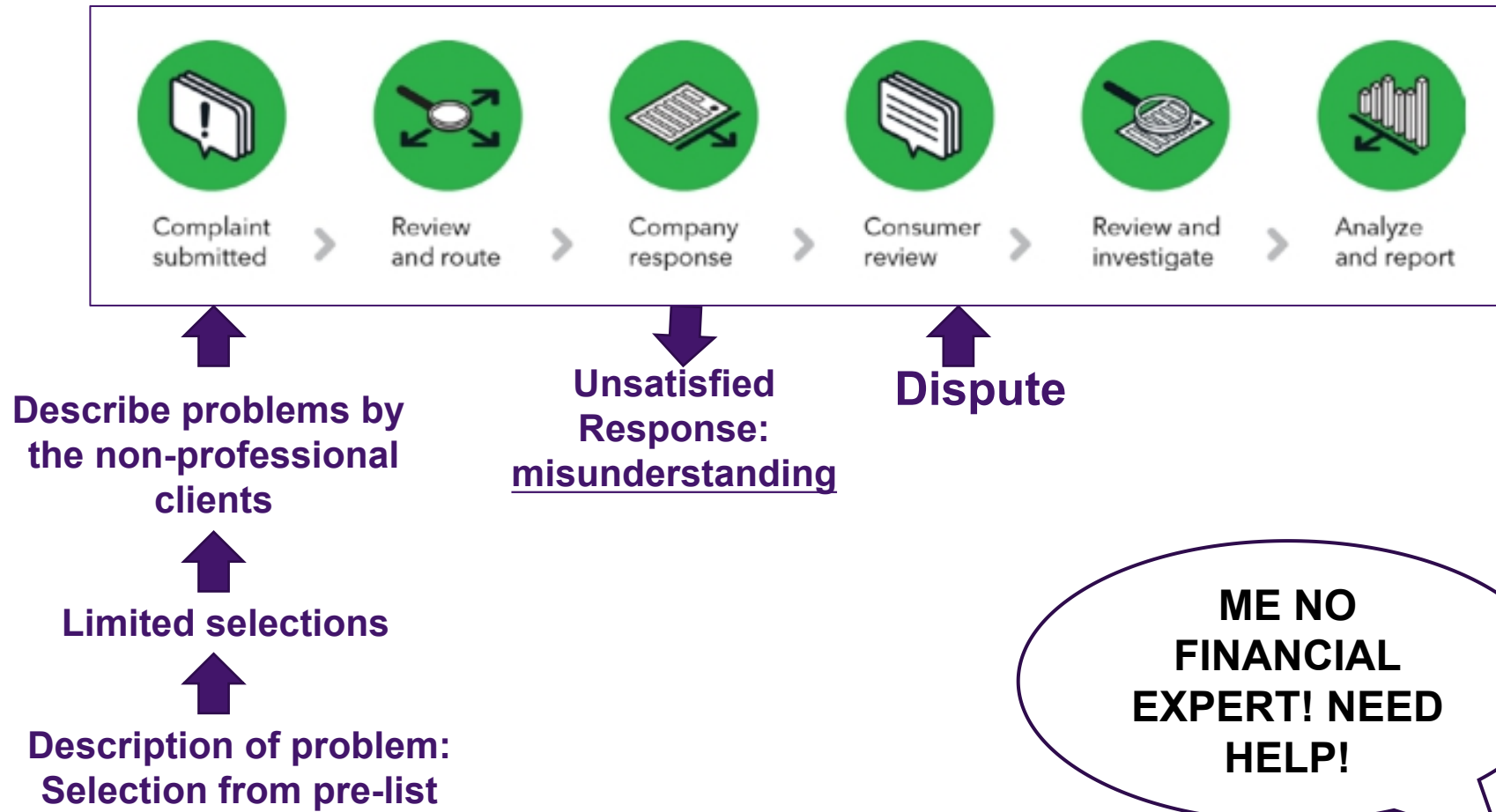
- Records of complaints with narrative



What is special about this product
to make more likely to be disputed?

Misspelled ratio
in narrative

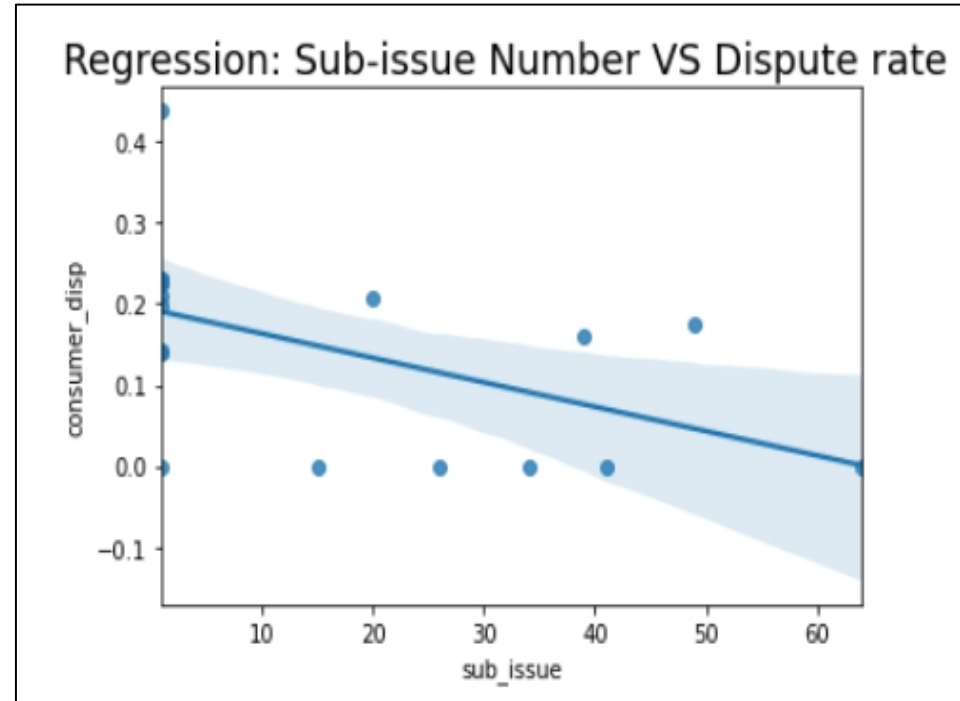
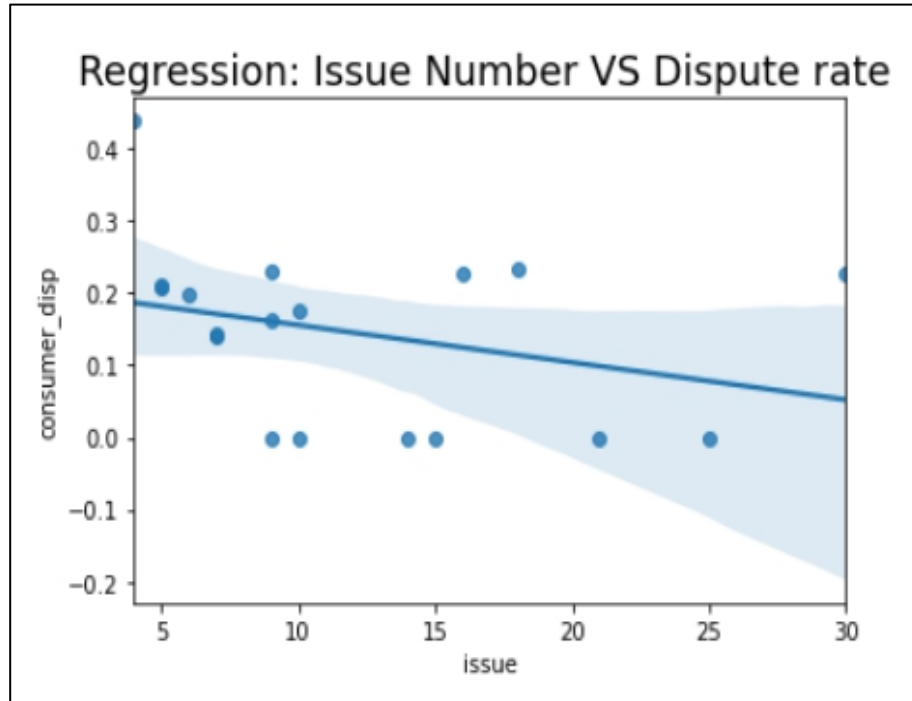




ME NO
FINANCIAL
EXPERT! NEED
HELP!



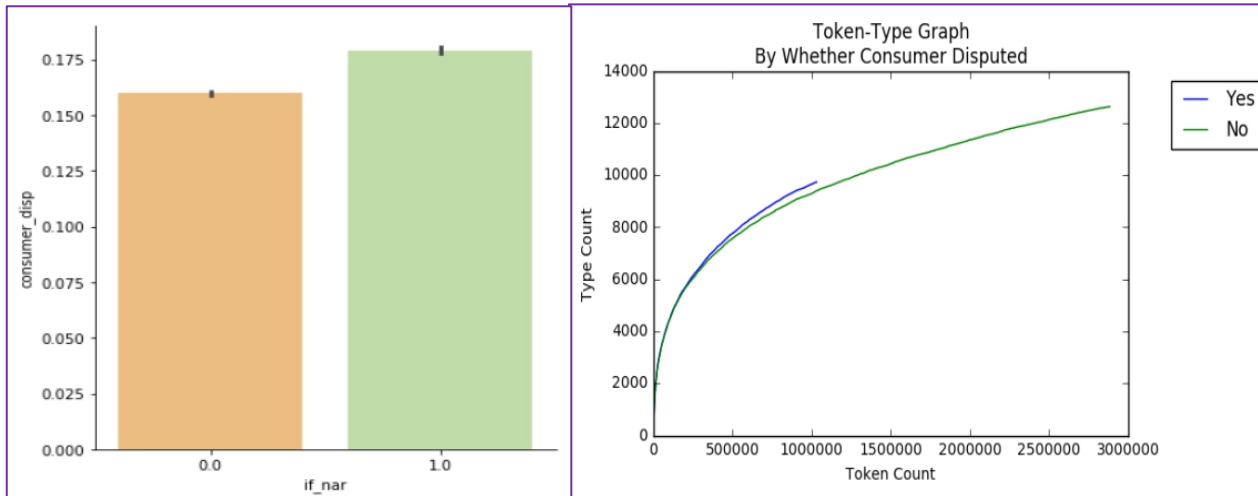
***Bank account and service is a product with few issue-selections and non sub-issue selection.**



Finding #1:
Issue & sub-issue selections of products are negatively related to dispute rate.

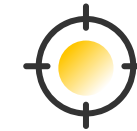


*Narrative and dispute



Higher dispute rate in complaints with narrative

Higher word diversity in complaints with narrative(blue line)



Managerial Insight #1: To CFPB:

Make more issue/sub-issue subjects for most disputed products, and thus to avoid the misunderstanding between consumer and company and to save time for both parties.





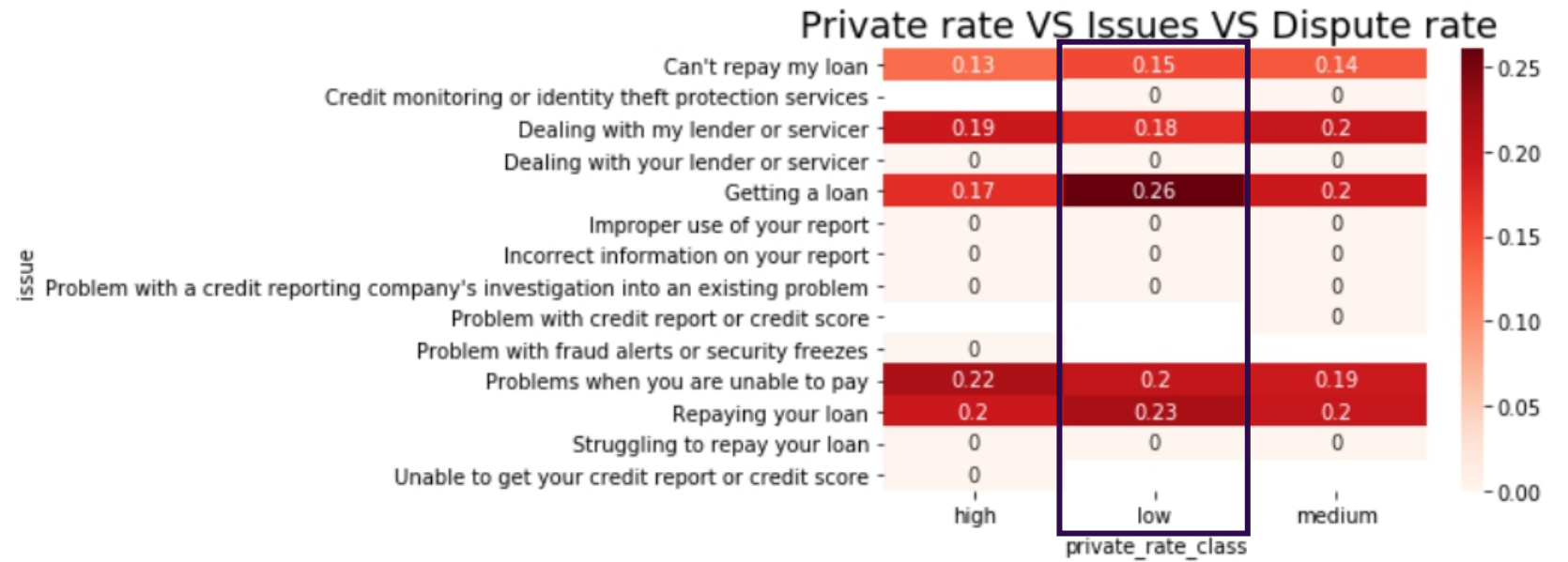
01

Why a complaint is more likely to result in a dispute?

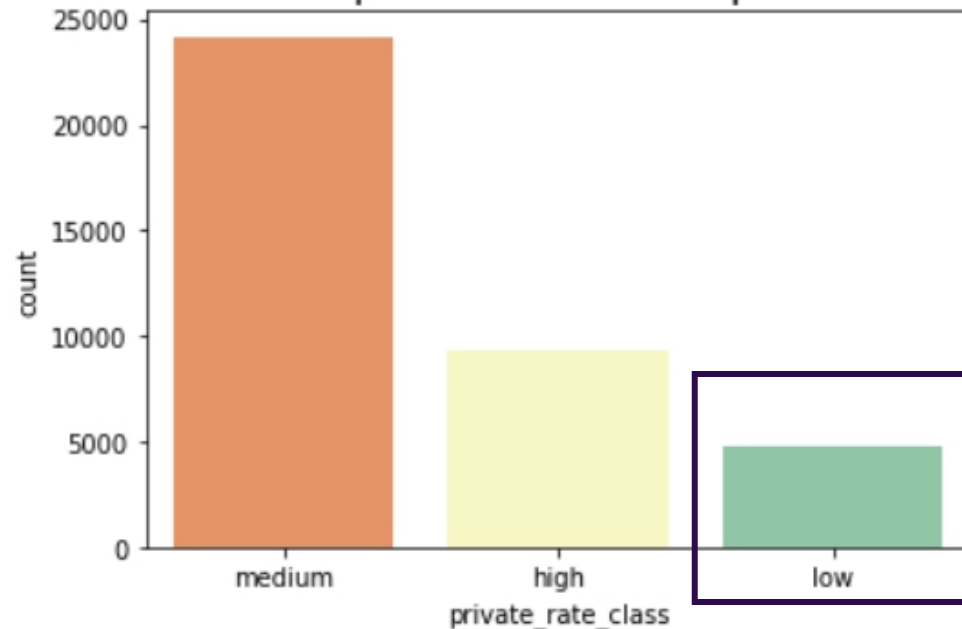
-Classification

-Student loans

DISPUTE & PRIVATE SCHOOL RATE



Numbers of complaints in different private rate state

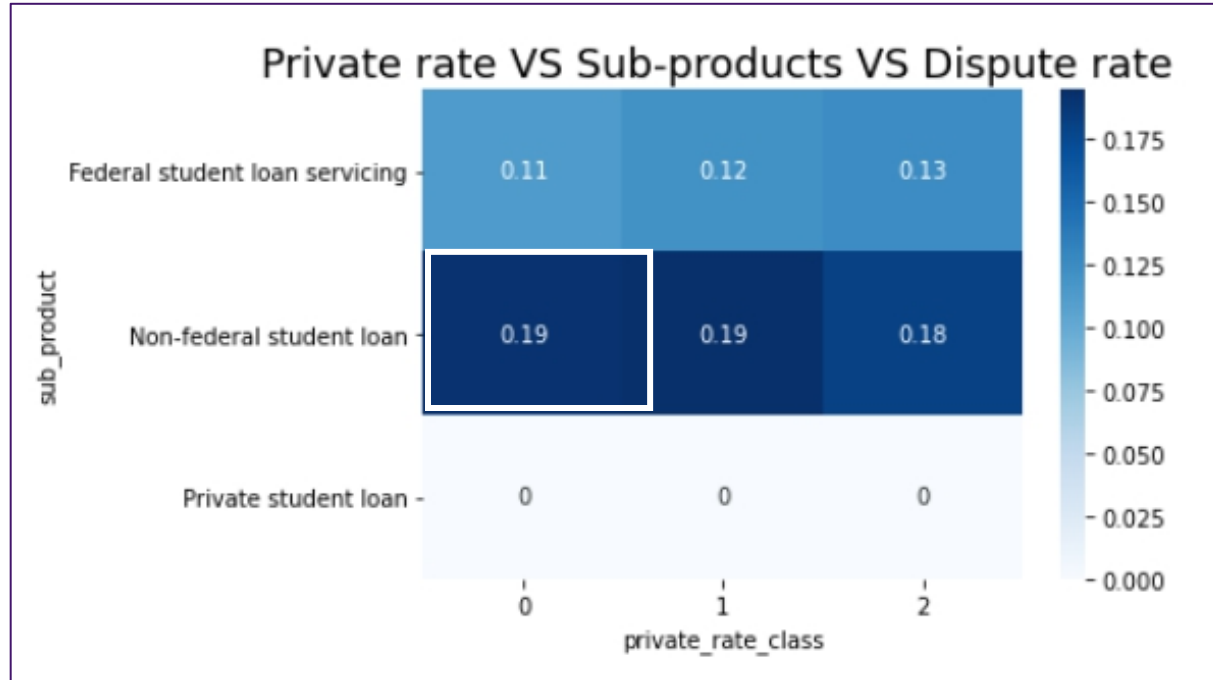


- high (private school in state:over 50%)
- medium (private school in state:between 30% and 50%)
- low (private school in state:below 30%)

Although the number of complaints is small, the disputed rate is highest in states where private school rate is low.

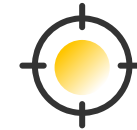


After research with clustering, we found...



Finding #2

In states where private school rate is low, responses to non-federal student loan are more likely to be disputed.



Managerial Insight #2

Banks need to strictly audit the users who need non federal loans, which can effectively reduce the complaint rate and even reduce the risk of default.





02

Suspicious sending period

Longest process period: 1962 days!

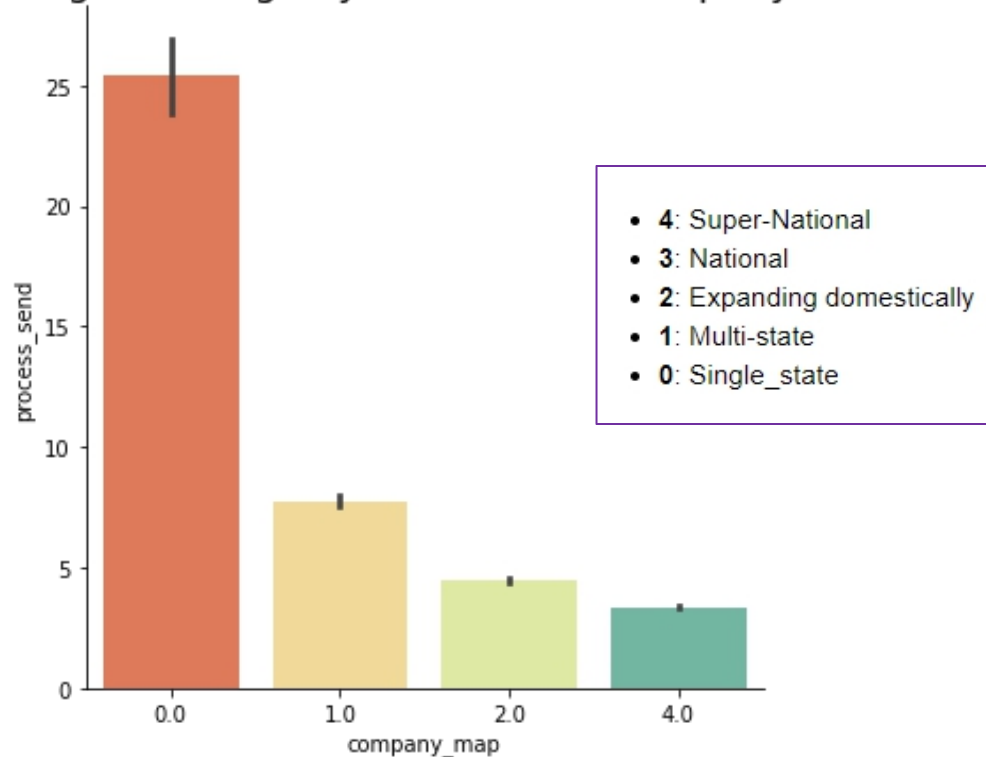


Finding #3:

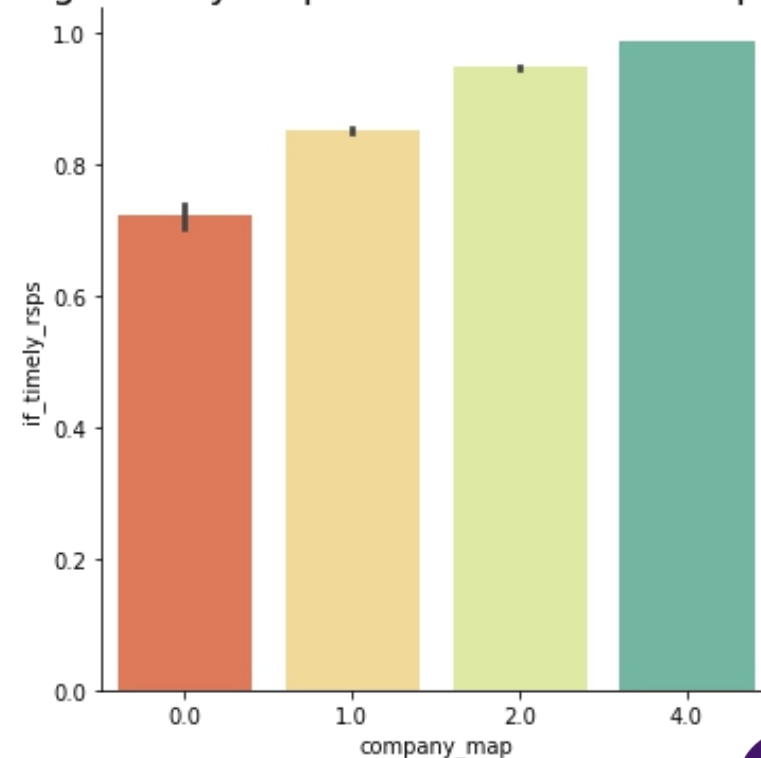
Companies in only one-state are more likely to respond untimely.



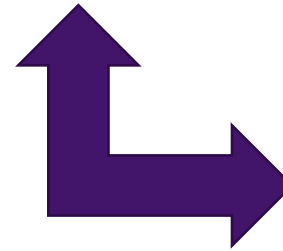
Average sending days of different company size



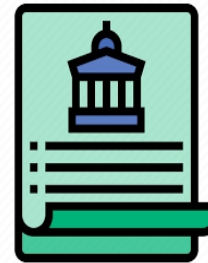
Average timely response of different company size



Complaints



Regulator

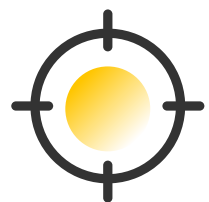


Financial institutions



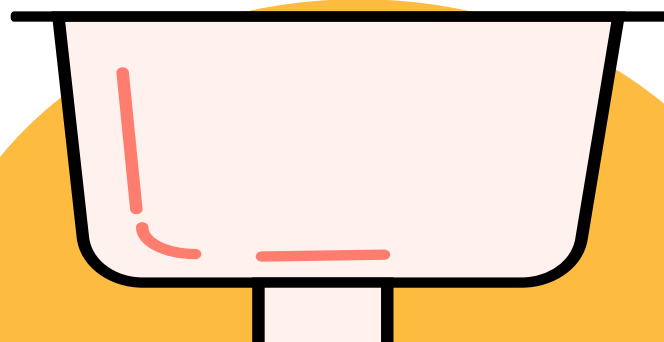
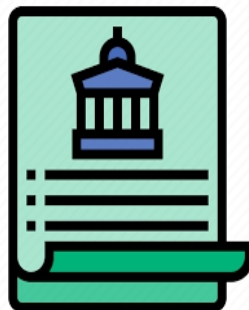
Actually, not all issues are under regulation of CFPB. Some will be passed to appropriate regulators before delivery to companies.





Managerial Insight #3

Establish an unified platform for all parties including CFPB, regulator and companies would help reduce the complaint response time to streamline the process.





Conclusion



Findings

Issue & sub-issue selections of products are negatively related to dispute rate.

In states where private school rate is low, responses to non-federal student loan are more like to be disputed.

Companies in only one-state are more likely to response untimely.



Managerial Insights



To CFPB:

Make more issue/sub-issue subjects for most disputed products, and thus to avoid the misunderstanding.

To banks:

They need to strictly audit the users who need non federal loans, which can effectively reduce the complaint rate and even reduce the risk of default.

To government:

Establish an unified platform for all parties including CFPB, regulator and companies would help reduce the complaint response time to streamline the process.