
Bank of America PI

A guide by Ahmed Chelly & Mehdi Zaied

Bank of America

CATEGORY
LEADERS

La Bank of America Corporation est une banque d'investissement multinationale américaine et une société holding de services financiers dont le siège social est situé au Bank of America Corporate Center à Charlotte, en Caroline du Nord. La banque a été fondée à San Francisco.

Bank of America[®]



Bank of America Dataset

14 Columns 3364 Row

ID: Customer

BAD : client defaulted on loan

LOAN

MORTDUE: Amount due on existing .

VALUE :of current property

REASON: = debt consolidation / home improvement

JOB

YOJ: Years at present job

DEROG: Number of major derogatory reports

DELINQ: Number of delinquent credit lines

CLAGE: Age of oldest trade line in months

NINQ: Number of recent credit lines

CLNO: Number of credit lines

DEBTINC: Debt-to-income ratio

The conditions for obtaining a loan



#the requested amount (LOAN) is 10 times greater than the Mortdue:

```
CreditEligible = IF([LOAN] * 10 > [MORTDUE], 1, 0)
```

//The seniority of the applicant is equal to at least 4 years:

```
YearsOfServiceEligible = IF([YOJ] ≥ 4, 1, 0)
```

//The maximum number of reports from the applicant to the bank is equal to 1:

```
BankReportEligible = IF([DEROG] ≤ 1, 1, 0)
```

//The debt to income ratio is not less than 37%:

```
DebtIncomeRatioEligible = IF([DEBTINC] ≥ 37, 1, 0)
```

//The conditions for obtaining a loan:

```
CreditApproved = IF(SUMX(Bank_America,[CreditEligible] * [YearsOfServiceEligible] *  
[BankReportEligible] * [DebtIncomeRatioEligible]) = 1, 1, 0)
```

//Total Credit Approve:

```
Total Credit Approved = Calculate ( CountRows ( Bank_America ) ,  
Bank_America[CreditEligible] = 1, Bank_America[YearsOfServiceEligible] = 1,  
Bank_America[BankReportEligible] = 1, Bank_America[DebtIncomeRatioEligible] = 1)
```

Loan categorized by work category

```
//Loan categorized by work category
LoanWorkCategory =
SWITCH(TRUE(),
[REASON] = "DebtCon" && [JOB] = "mgr", "Debt Consolidation (Manager)",
[REASON] = "DebtCon" && [JOB] = "officer", "Debt Consolidation (Officer)",
[REASON] = "DebtCon" && [JOB] = "other", "Debt Consolidation (Other)",
[REASON] = "DebtCon" && [JOB] = "profexe", "Debt Consolidation
(Professional/Executive)",
[REASON] = "DebtCon" && [JOB] = "sales", "Debt Consolidation (Sales)",
[REASON] = "DebtCon" && [JOB] = "self", "Debt Consolidation (Self-Employed)",
[REASON] = "HomeImp" && [JOB] = "mgr", "Home Improvement (Manager)",
[REASON] = "HomeImp" && [JOB] = "officer", "Home Improvement (Officer)",
[REASON] = "HomeImp" && [JOB] = "other", "Home Improvement (Other)",
[REASON] = "HomeImp" && [JOB] = "profexe", "Home Improvement (Professional/Executive)",
[REASON] = "HomeImp" && [JOB] = "sales", "Home Improvement (Sales)",
[REASON] = "HomeImp" && [JOB] = "self", "Home Improvement (Self-Employed)",
"Other")
```

To add Customers Country and State

123 Index	ABC Country	ABC State
<div><div>Valid</div><div>Error</div><div>Empty</div></div> <div>100%</div> <div>0%</div> <div>0%</div>	<div><div>Valid</div><div>Error</div><div>Empty</div></div> <div>100%</div> <div>0%</div> <div>0%</div>	<div><div>Valid</div><div>Error</div><div>Empty</div></div> <div>100%</div> <div>0%</div> <div>0%</div>
0	United States	California
1	United States	California
2	United States	California
3	United States	California
4	United States	California
5	United States	California
6	United States	California
7	United States	California
8	United States	California
9	United States	California
10	United States	California

To add Customers Country and State

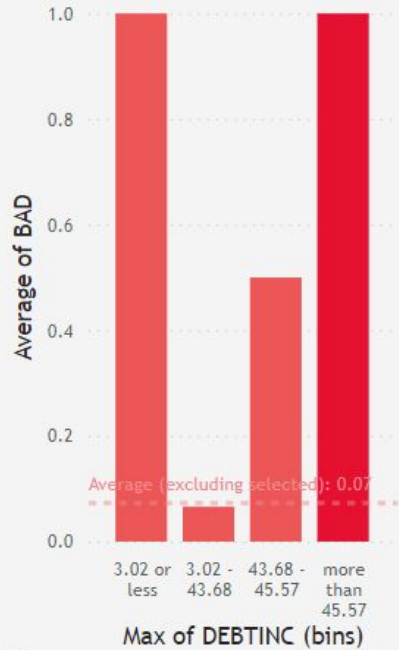
```
//To add Customers and Country  
= Table.AddColumn("#Changed Type", "Country", each "United States", type text)  
  
//To add Customers and State  
= Table.AddColumn("#Added Index", "State", each if [Index] < 1001 then "California" else  
if [Index] < 2001 then "Georgia" else if [Index] ≥ 2000 then "Texas" else null)
```

Loan Advice

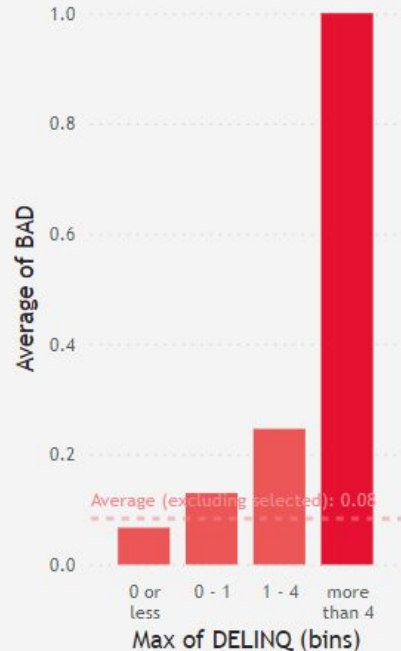
Increase The number of reports of the applicant to the bank from 1 to 2.

Increase The debt to income ratio from 37% To %45.74.

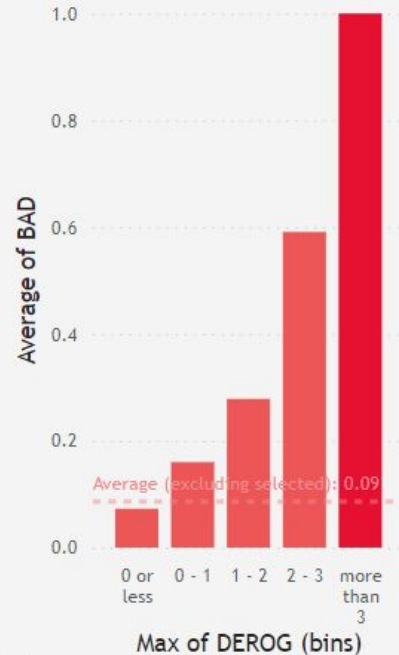
← BAD is more likely to increase when Max of DEBTINC is more than 45.57 than otherwise (on average).



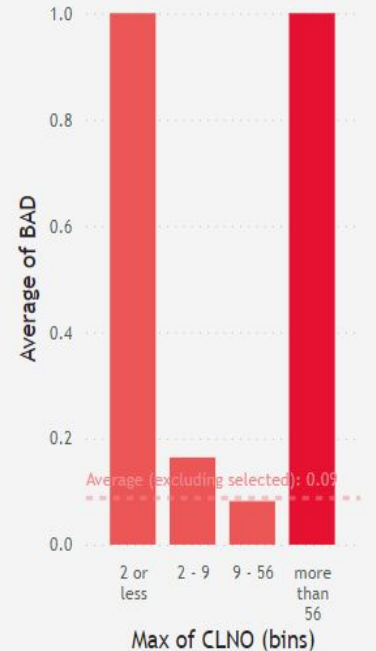
← BAD is more likely to increase when Max of DELINQ is more than 4 than otherwise (on average).



← BAD is more likely to increase when Max of DEROG is more than 3 than otherwise (on average).



← BAD is more likely to increase when Max of CLNO is more than 56 than otherwise (on average).



Report On Power BI Server

LINK 1

Bank of America[®]



Overview

**Key
influencers**

Analysis



ID

- ☐ Select all
- ☐ MD100416
- ☐ MD100951
- ☐ MD102108
- ☐ MD103162
- ☐ MD103598

JOB

- ☐ Select all
- ☐ Mgr
- ☐ Office
- ☐ Other
- ☐ ProfExe
- ☐ Sales
- ☐ Self

REASON

- ☐ Select all
- ☐ DebtCon
- ☐ HomImp

Total Clients

3364

Total Credit Approved

817

Type Of Loan

DebtCon
2369HomImp
995

Bad Clients

300

Try one of these to get started

top bank america states by total
credit approvedwhat is the total credit approved by
bank america state

Total of LOAN

\$64.44M

Total Mortgage

\$256.5M

Jobs

Other
1286ProfExe
899Office
577Mgr
450Self
99Sales
53

ID

Count of DEROG

MD100416	1
MD100951	1
MD102108	1
MD103162	1
MD103598	1
MD104005	1
MD104442	1
MD105096	1
MD105480	1
MD105654	1
MD106561	1
MD107012	1
MD107241	1
MD107271	1
MD107291	1
MD107799	1
MD108319	1
MD108464	1
MD109084	1
MD109253	1
MD109377	1
MD109498	1
MD109808	1
MD110442	1
MD111107	1
MD111488	1
MD111917	1
MD112178	1
MD112248	1
Total	3364

VALUE Mortgage LOAN





ID

☐ Select all

☐ MD100416

☐ MD100951

☐ MD102108

☐ MD103162

☐ MD103598

JOB

☐ Select all

☐ Mgr

☐ Office

☐ Other

☐ ProfExe

☐ Sales

☐ Self

REASON

☐ Select all

☐ DebtCon

☐ Homelmp

Key influencers

Top segments



What influences BAD
to

Increase



?

When...

....the average of BAD
increases by

Max of DEBTINC is more
than 45.57



0.93

Max of DELINQ is more than
4



0.92

Max of DEROG is more than
3



0.91

Max of CLNO is more than
56



0.91

Total of LOAN and Total of MORTDUE

● Sum of LOAN ● Sum of MORTDUE

\$300M

\$250M

\$200M

\$150M

\$100M

\$50M

\$0M



Max Years On Job

Max of YOJ

40

30

20

10

0

Office

Other

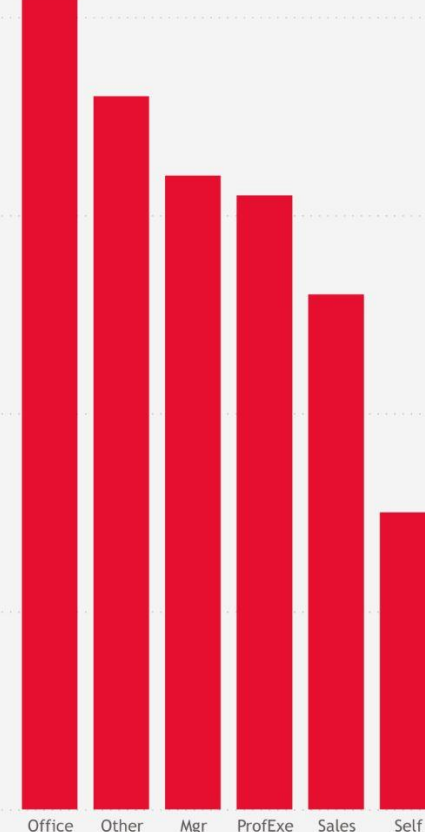
Mgr

ProfExe

Sales

Self

JOB





ID

☐ Select all☐ MD100416☐ MD100951☐ MD102108☐ MD103162☐ MD103598☐ MD104005☐ MD104447

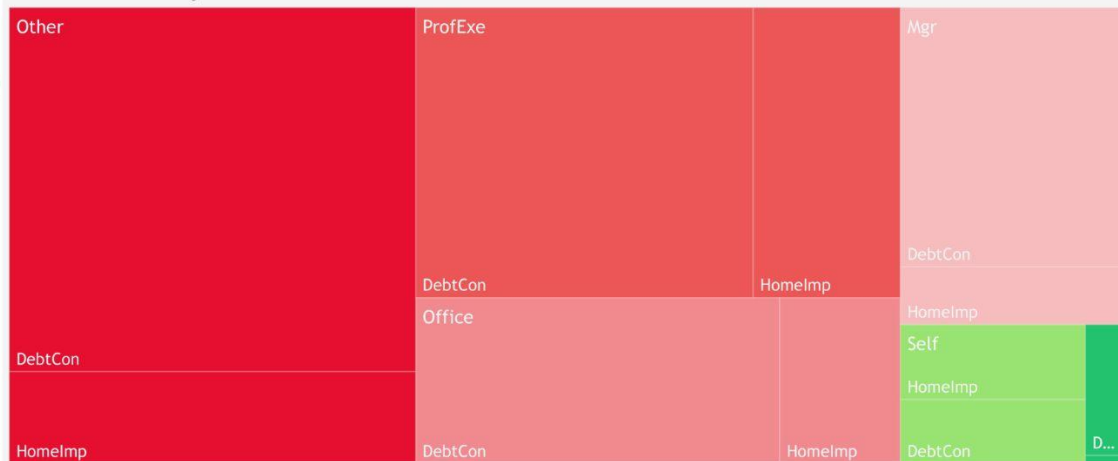
JOB

☐ Select all☐ Mgr☐ Office☐ Other☐ ProfExe☐ Sales☐ Self

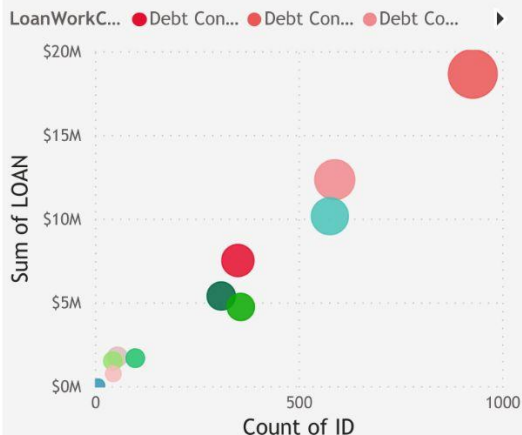
REASON

☐ Select all☐ DebtCon☐ Homelmp

Total of LOAN by JOB and REASON



LOAN Category by Job Category



Total of LOAN by State



Debt Consolidation (Other) had the highest Count of ID (928) and Sum of LOAN (\$18,650,300).

At \$39,080,100, Texas had the highest Sum of LOAN and was 310.62% higher than California, which had the lowest Sum of LOAN at \$9,517,300.

Texas accounted for 60.65% of Sum of LOAN.

Thank You
