

Credit Card Usage & Risk Analysis

Total Customer
30000

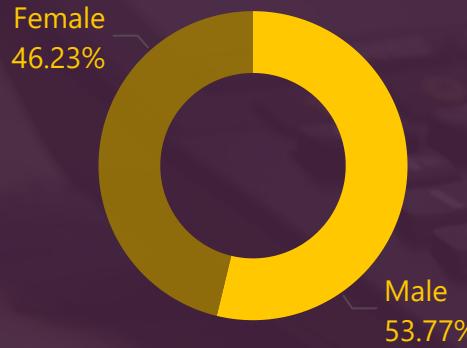
Total Defaults
6636

Default Rate
22.1%

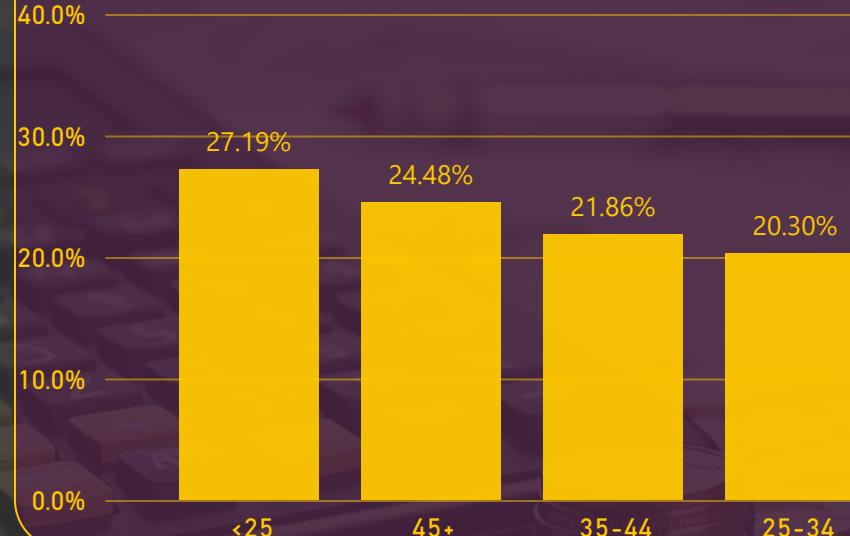
Average Credit Limit
\$167K

Default Rate by Gender

● Male ● Female



DefaultRate by AgeGroup



LimitBal Vs. BillAmount with Riskscore



DefaultRate by CreditLimitDecile

10000		406000	109000	208000		505000	
35-44	45+		45+		35-44		
		<25		<25		25-34	
					45+		
						35-44	
							25-34
<25	25-34	45+	25-34	<25	45+	35-44	25-34

Gender

- Female
- Male

MonthIndex

- 1
- 2
- 3
- 4
- 5

Marital Status

- Married
- Others
- Single

AgeGroup

- <25
- 25-34
- 35-44
- 45+

Education

- Graduate School
- High School
- Not Disclose
- Others



Key Influencer for DefaultRate

Key influencers **Top segments**

What influences DefaultFlag to **Increase**

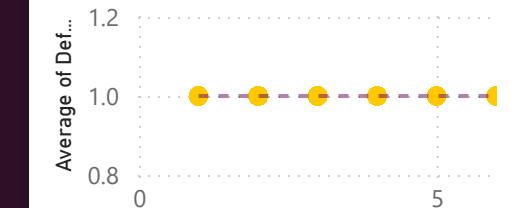


When...

....the average of
DefaultFlag increases by

Count of PayStatus goes up
0.91

On average when Count of PayStatus
increases, DefaultFlag also increases.



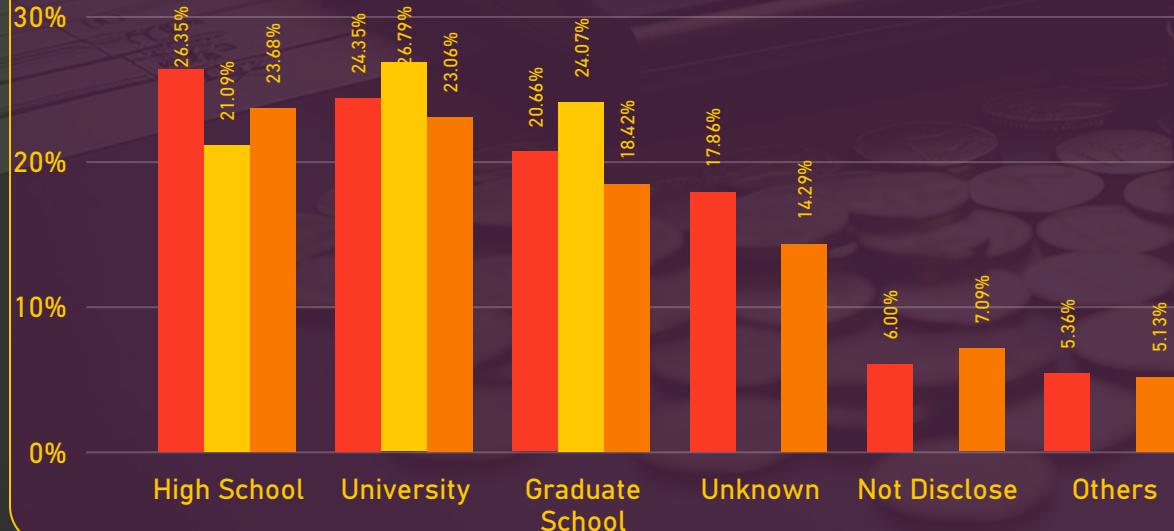
Sum of LIMIT_BAL is 30000
or less

Sum of BillAmount goes up
14483050.69

Sort by: **Impact** **Count**

DefaultRate by Education and Marital Status

● Married ● Others ● Single



Default Drivers by Segment

🔓 GENDER...

Male

🔓 MARRI...

Married

🔓 EDUCA...

University

🔓 AGEGR...

45+

🔓 LIMIT...

600000

DefaultR...

0.22

Male

0.24

Female

0.21

Others

0.29

Married

0.26

Single

0.23

University

0.27

Graduate ...

0.23

35-44

0.27

25-34

0.25

High Sch...

0.29

<25

0.38

Unknown

0.29

45+

0.29

140000

0.55

120000

0.50

380000

0.50

Total

Top 10 Highest Risk Score Customers

Customer ID	EDUCATION	AgeGroup	RiskScore	Sum of LIMIT_BAL	MARRIAGE	GENDER
24498	Graduate School	35-44	2	60,000.00	Single	Male
24498	Graduate School	35-44	3	60,000.00	Single	Male
24498	Graduate School	35-44	1	60,000.00	Single	Male
24857	University	45+	3	2,10,000.00	Single	Male
24857	University	45+	1	2,10,000.00	Single	Male
24857	University	45+	1	2,10,000.00	Single	Male
27	Graduate School	25-34	2	60,000.00	Single	Male
27	Graduate School	25-34	5	60,000.00	Single	Male
27	Graduate School	25-34	1	60,000.00	Single	Male
6156	Graduate School	<25	1	30,000.00	Single	Female
6156	Graduate School	<25	82	30,000.00	Single	Female
Total			6	14,50,000.00		



Customer ID

26975

Education

Graduate School

AgeGroup

35-44

Marital Status

Married

Credit Limit Balance

\$3,00,000

Risk Score

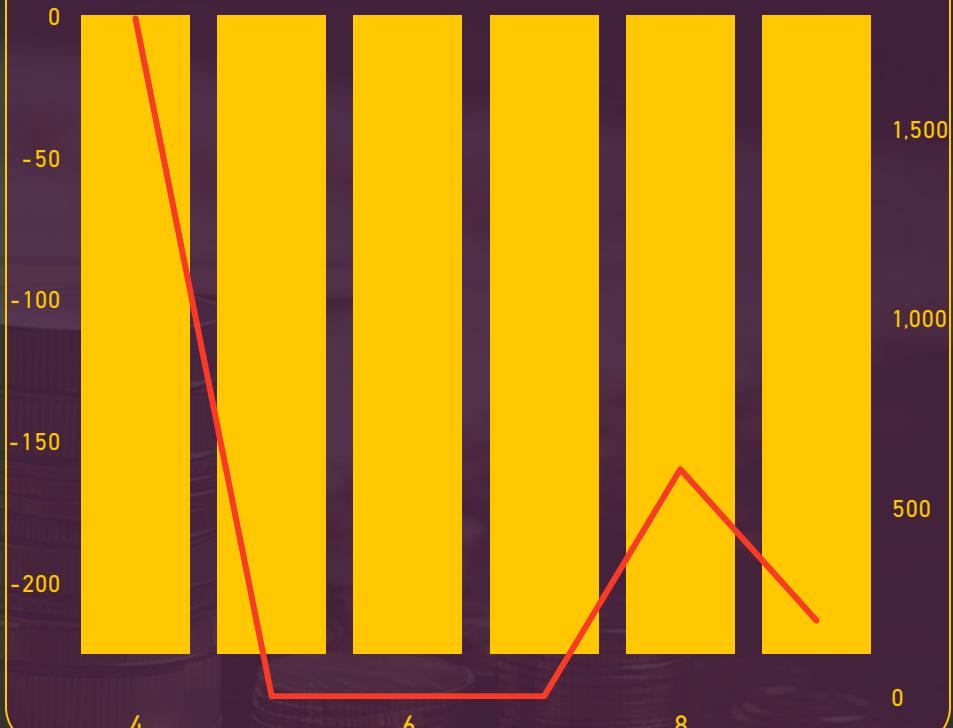
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Payment History



Bill vs. Payment

● Average of BillAmount ● Average of PayAmount



Recommended Action

Manual Review / Limit Decrease

Time Trends Analysis

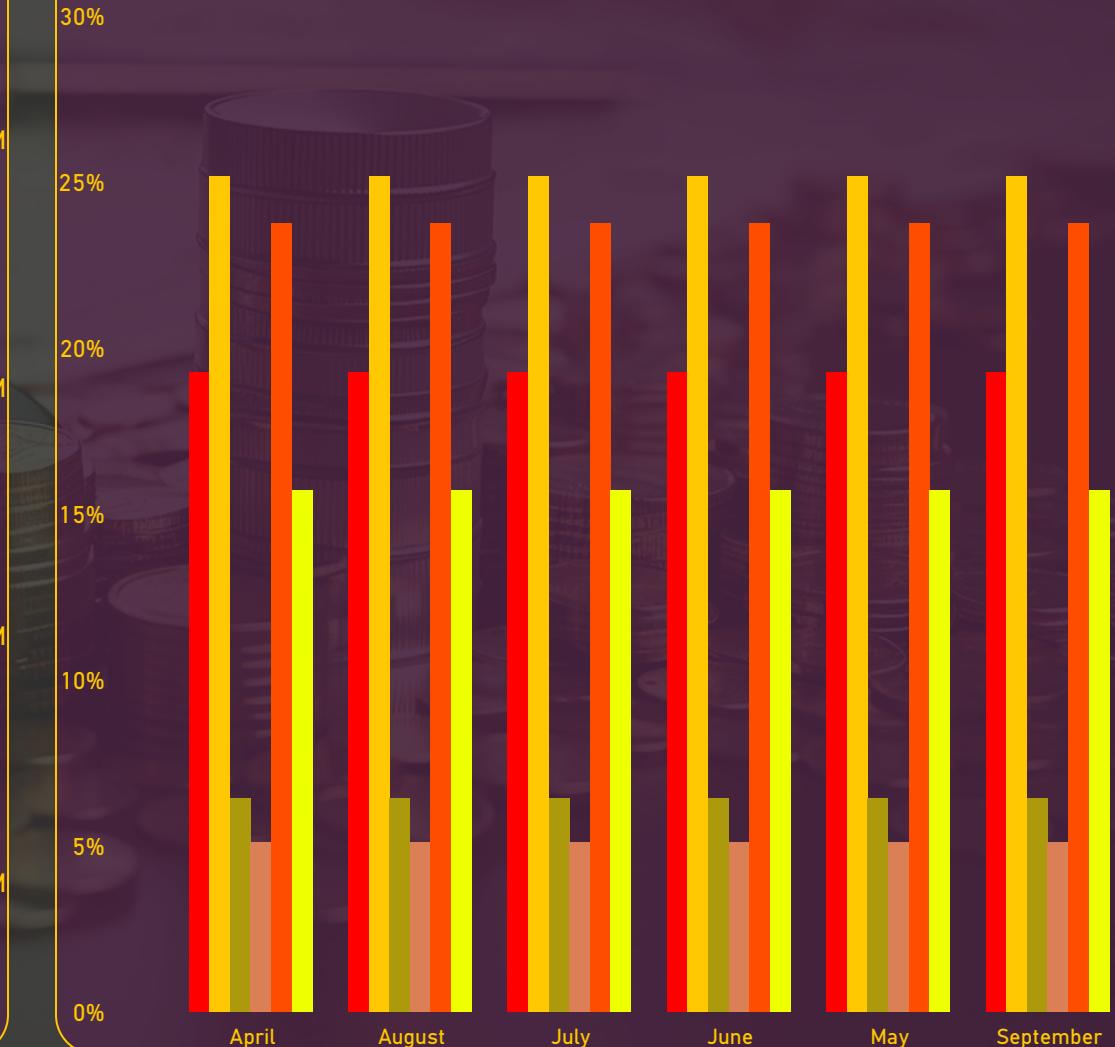
TotalBill and TotalPay Over Month

● TotalBill ● TotalPay



DefaultRate by Month With Education

● Graduate School ● High School ● Not Disclose ● Others ● University ● Unknown



Model Insights & Recommendations



Key Findings

- 💡 Default Rate is ~22%. That concludes 1 in 5 customers tend to default.
- 💡 Younger customers Who have age group of 25-35 years and and have lower education level show the highest delinquency rates.
- 💡 Customers with high utilization of credit limit or spending close to their max limit are 2x more likely to default.
- 💡 Payment behavior is the strongest predictor, delayed payments in the last 2 months sharply increase default risk.
- 💡 Customers with longer credit history and regular payments fall consistently in the low-risk segment.



Actionable Recommendations

- ✓ **Early Intervention**: Send reminder notifications and payment plans to customers who miss payments in the last 1–2 months.
- ✓ **Credit Limit Management**: Apply stricter controls Or lower credit growth for customers with high utilization and prior late payments.
- ✓ **Customer Segmentation**: Create special support programs for younger, lower-educated customers (financial literacy, flexible repayment).
- ✓ **Reward Good Customers**: Offer loyalty incentives / higher credit limits for customers with strong repayment track record.



Limitations

- ⚠ **Dataset scope**: Based only on one bank's customers in Taiwan results may not generalize globally.
- ⚠ **Feature gaps**: No income, job, or asset information model ignores key financial stability factors.
- ⚠ **Time horizon**: Only 6 months of payment history is included, longer history could improve predictions.
- ⚠ **Outcome imbalance**: 22% default rate vs 78% non-default may bias predictive models unless balanced.
- ⚠ **Static data**: Does not account for real-time behavioral or macro-economic changes (inflation, layoffs, etc.).