

Financial Data Analysis

POWER BI | DAX

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MEASURES

Running total of credit card Transaction

4 week moving average of credit limit for each client

Mom growth & Wow growth on transition amount

Customer acquisition cost (cac) as a ratio of transaction amount

Yearly average of avg_utilization ratio for all clients

% of interest_earned compared to total_revolving balance for each client

Top 5 clients by total_transaction amount

Clients whose avg_utilisation ratio exceeds 80%

Churn indicator in the last 6 months

Credit Risk Score

Running total of credit card Transaction

```
Running total = CALCULATE([Total transaction Amount],FILTER(ALL(credit_card),  
credit_card[Week_Start_Date] <=max(credit_card[Week_Start_Date])))
```

t

Week_Start_Date Total transaction Amount Running total

01 January 2023	835767	835767
08 January 2023	844739	1680506
15 January 2023	923367	2603873
22 January 2023	869235	3473108
29 January 2023	849078	4322186
05 February 2023	898867	5221053
12 February 2023	890756	6111809
19 February 2023	868091	6979900
26 February 2023	881861	7861761
05 March 2023	793080	8654841
12 March 2023	915725	9570566
Total	45533021	45533021

4 week moving average of credit limit for each client

```
Moving_average_4_weeks =  
  
var weeks4 =DATESINPERIOD('Calendar'[Date],max('Calendar'[Date]),-28,DAY)  
  
Var total_amount =CALCULATE([Total transaction Amount],weeks4)  
t  
var num_of_weeks =CALCULATE(DISTINCTCOUNT('Calendar'[Week_num]),weeks4)  
  
RETURN DIVIDE(total_amount,num_of_weeks,0)
```

Week_num	Total transaction Amount	Moving_average_4_weeks
1	835767	835767
2	844739	840253
3	923367	867958
4	869235	868277
5	849078	871605
6	898867	885137
7	890756	876984
8	868091	876698
9	881861	884894
10	793080	858447
11	915725	864689
12	890081	870187
13	789941	847207
14	809413	851290
Total	45533021	689950

Mom growth & Wow growth on transition amount

```
mom%growth =  
  
var prev_month =CALCULATE([Total transaction Amount],DATEADD('Calendar'  
[Date],-1,MONTH))  
  
RETURN DIVIDE([Total transaction Amount]-prev_month,0)
```

Month	Total transaction Amount	mom%growth
July	4546958	28.68%
January	4322186	0.00%
December	4241103	24.54%
April	4174728	23.19%
October	4050909	17.32%
February	3539575	-18.11%
June	3533660	3.11%
September	3452874	0.09%
August	3449868	-24.13%
May	3426913	-17.91%
November	3405420	-15.93%
Total	45533021	10.27%

Wow growth on transition amount

```
wow% growth =
```

```
var prev_week =CALCULATE([Total transaction Amount],DATEADD('Calendar'  
[Date],-7,DAY))  
  
RETURN DIVIDE([Total transaction Amount]-prev_week,prev_week,0)
```

Week_num	Total transaction Amount	wow% growth
1	835767	0%
2	844739	1%
3	923367	9%
4	869235	-6%
5	849078	-2%
6	898867	6%
7	890756	-1%
8	868091	-3%
9	881861	2%
10	793080	-10%
11	915725	15%
12	890081	-3%
13	789941	-11%
14	800412	2%
Total	45533021	2%

Customer acquisition cost (cac) as a ratio of transaction amount

```
ratio_cac_transaction_amount = DIVIDE(SUM(credit_card  
[Customer_Acq_Cost]),[Total transaction Amount],0)
```

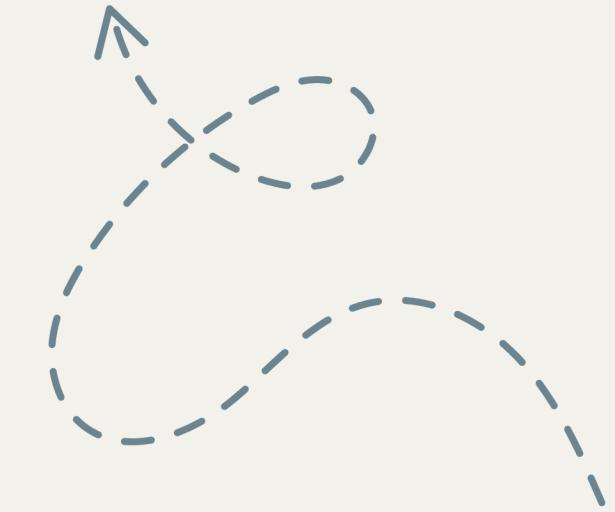
2.18%

ratio_cac_transaction_amount

Yearly average of avg_utilization_ratio for all clients

```
avg_utilization_ratio = AVERAGE(credit_card[Avg_Utilization_Ratio])
```

0.27
avg_utilization_ratio



Client_Num
All
<input type="checkbox"/> 708082083
<input type="checkbox"/> 708083283
<input type="checkbox"/> 708084558
<input type="checkbox"/> 708085458
<input type="checkbox"/> 708086958
<input type="checkbox"/> 708095133
<input type="checkbox"/> 708098133

% of interest_earned compared to total_revolving balance for each client

```
interest_earned_by_revolving_balance = DIVIDE(SUM(credit_card  
[Interest_Earned]),SUM(credit_card[Total_Revolving_Bal]))
```

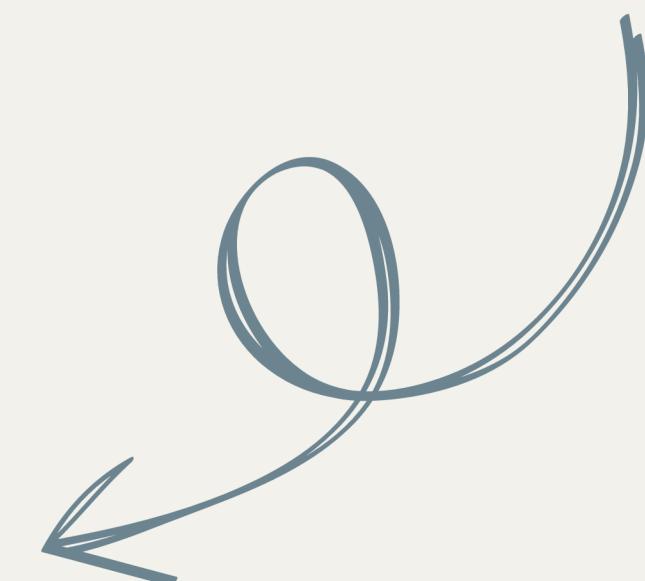
66.63%

interest_earned_by_revolving_balance

Top 5 Clients by Total Transaction Amount.

```
top_5_clients = TOPN(5, SUMMARIZE(credit_card,credit_card[Client_Num],"total amount",  
[Total transaction Amount]),"total amount",DESC)
```

920819113	79463
919695363	19739
956622169	19597
941614504	18504
718140783	18484



**clients whose Avg_Utilization_Ratio exceeds
80%.**

```
check_exceeds_80 = IF(credit_card[Avg_Utilization_Ratio]>0.80,true,false)
```

Customer Churn Indicator of the last six months

```
Churn =  
var balance =CALCULATE([Total transaction Amount],DATESINPERIOD('Calendar'[Date],MAX  
('Calendar'[Date]),-6,MONTH))  
  
RETURN if(ISBLANK(balance),"churned","not churned")
```

Churn
churned
churned
not churned
not churned
not churned
churned
not churned
churned

the percentage of clients with Delinquent_Acc > 0

Deliquency_rate =

```
var greater_zero =CALCULATE(COUNTROWS  
(credit_card),credit_card[Delinquent_Acc] >0)
```

```
var total_rows =COUNTROWS(credit_card)
```

```
RETURN DIVIDE(greater_zero,total_rows,0)
```

0.06

Deliquency_rate

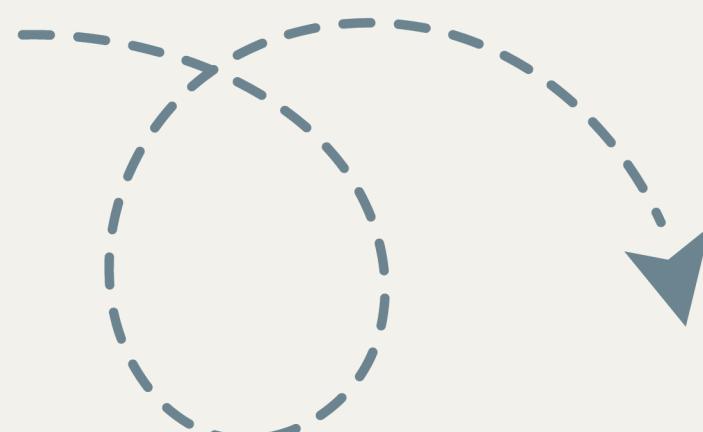
**Credit Risk score for each client based on their
Avg_Utilization_Ratio, Delinquent_Acc, and
Total_Revolving_Bal.**

```
Normalize_revolving_balance = DIVIDE(credit_card  
[Total_Revolving_Bal]-min(credit_card[Total_Revolving_Bal]),  
  
max(credit_card[Total_Revolving_Bal])-min(credit_card  
[Total_Revolving_Bal]),0)
```

```
Credit_risk_score =  
[avg_utilization_ratio] * 0.5 +  
credit_card[Normalize_revolving_balance] * 0.3+  
credit_card[Delinquent_Acc] * 0.2 +
```

the average Cust_Satisfaction_Score by Card_Category.

```
avg_satisfaction_score = SUMMARIZE(credit_card,  
credit_card[Card_Category], "avg_satisfaction_score",  
AVERAGE(_customer[Cust_Satisfaction_Score]))
```



Card_Category	avg_satisfaction_score
Blue	3.19927536231884
Silver	3.22187981510015
Gold	3.04663212435233
Platinum	2.71641791044776

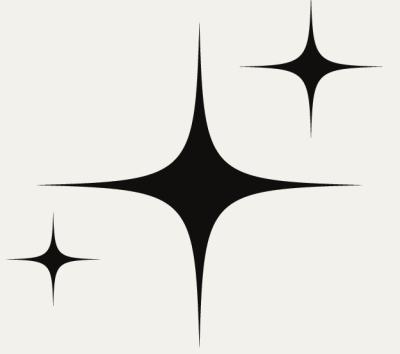
Loan Approval vs Credit Limit

```
loan_approval_yes = CALCULATE(AVERAGE(credit_card  
[Credit_Limit]),_customer[Personal_loan] ="yess")
```

```
loan_approval_no = CALCULATE(AVERAGE(credit_card[Credit_Limit]),  
_customer[Personal_loan] ="no")
```

High Risk Clients Flag

```
Flag_clients =  
  
if(credit_card[Normalize_revolving_balance]>0.9 &  
[avg_utilization_ratio] >0.8,"flagged","not flagged")
```



Let's Connect



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