

# BANK LOAN REPORT QUERY

## SUMMARY

*MTD – Month-to-Date*

*PMTD – Previous Month-to-Date*

*Note: PMTD is used to determine the MoM (Month Over Month) trend change*

$$\text{Month to month(MoM)} = (\text{MTD} - \text{PMTD}) / \text{PMTD}$$

## KPI's:

### Total Loan Applications

```
SELECT COUNT(id) AS Total_Loan_Application FROM bank_loan
```

Total_Loan_Application
38576

### MTD Loan Applications

```
SELECT COUNT(id) AS MTD_Total_Loan_Application FROM bank_loan  
WHERE MONTH(issue_date) = 12
```

MTD_Total_Loan_Application
4314

### PMTD Loan Applications

```
SELECT COUNT(id) AS PMTD_Total_Loan_Application FROM bank_loan  
WHERE MONTH(issue_date) = 11
```

PMTD_Total_Loan_Application
4035

---

### Total Funded Amount

```
SELECT SUM(loan_amount) AS Total_Funded_Amount FROM bank_loan
```

Total_Funded_Amount
435757075

### MTD Total Funded Amount

```
SELECT SUM(loan_amount) AS MTD_Total_Funded_Amount FROM bank_loan  
WHERE MONTH(issue_date) = 12
```

MTD_Total_Funded_Amount
53981425

### PMTD Total Funded Amount

```
SELECT SUM(loan_amount) AS PMTD_Total_Funded_Amount FROM bank_loan
WHERE MONTH(issue_date) = 11
```

PMTD_Total_Funded_Amount
47754825

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### Total Amount Received

```
SELECT SUM(total_payment) AS Total_Amount_Receieved FROM bank_loan
```

Total_Amount_Receieved
473070933

### MTD Total Amount Received

```
SELECT SUM(total_payment) AS MTD_Total_Amount_Receieved FROM bank_loan
WHERE MONTH(issue_date) = 12
```

MTD_Total_Amount_Receieved
58074380

### PMTD Total Amount Received

```
SELECT SUM(total_payment) AS PMTD_Total_Amount_Receieved FROM bank_loan
WHERE MONTH(issue_date) = 11
```

PMTD_Total_Amount_Receieved
50132030

---

### Average Interest Rate

```
SELECT ROUND(AVG(int_rate) * 100, 2) AS Average_Interest_Rate FROM bank_loan
```

Average_Interest_Rate
12.05

### MTD Average Interest

```
SELECT ROUND(AVG(int_rate) * 100, 2) AS MTD_Average_Interest_Rate FROM bank_loan
WHERE MONTH(issue_date) = 12
```

MTD_Average_Interest_Rate
12.36

### PMTD Average Interest

```
SELECT ROUND(AVG(int_rate) * 100, 2) AS PMTD_Average_Interest_Rate FROM bank_loan
WHERE MONTH(issue_date) = 11
```

PMTD_Average_Interest_Rate
11.94

---

### Average DTI

```
SELECT ROUND(AVG(dti) * 100, 2) AS Average_DTI FROM bank_loan
```

Average_DTI
13.33

### MTD Average DTI

```
SELECT ROUND(AVG(dti) * 100, 2) AS MTD_Average_DTI FROM bank_loan
WHERE MONTH(issue_date) = 12
```

MTD_Average_DTI
13.67

### PMTD Average DTI

```
SELECT ROUND(AVG(dti) * 100, 2) AS PMTD_Average_DTI FROM bank_loan
WHERE MONTH(issue_date) = 11
```

PMTD_Average_DTI
13.3

## GOOD LOAN ISSUED

### Good Loan Percentage

```
SELECT
    (COUNT(CASE WHEN loan_status = 'Fully Paid' OR loan_status = 'Current' THEN id
END) * 100.0)
    /
    COUNT(id) AS Good_Loan_percentage
FROM bank_loan
```

Good_Loan_percentage
86.175342181667

### Good Loan Applications

```
SELECT COUNT(id) AS Good_Loan_Applications FROM bank_loan
WHERE loan_status = 'Fully Paid' OR loan_status = 'Current'
```

Good_Loan_Applications
33243

### Good Loan Funded Amount

```
SELECT SUM(loan_amount) AS Good_Loan_Funded_Amount FROM bank_loan
WHERE loan_status = 'Fully Paid' OR loan_status = 'Current'
```

Good_Loan_Funded_Amount
370224850

### Good Loan Amount Received

```
SELECT SUM(total_payment) AS Good_Loan_Received_Amount FROM bank_loan
WHERE loan_status = 'Fully Paid' OR loan_status = 'Current'
```

Good_Loan_Received_Amount
435786170

## BAD LOAN ISSUED

### Bad Loan Percentage

```
SELECT
    (COUNT(CASE WHEN loan_status = 'Charged Off' THEN id END) * 100.0)
    /
    COUNT(id) AS Bad_Loan_percentage
FROM bank_loan
```

Bad_Loan_percentage
13.824657818332

### Bad Loan Applications

```
SELECT COUNT(id) AS Bad_Loan_Applications FROM bank_loan
WHERE loan_status = 'Charged Off'
```

Bad_Loan_Applications
5333

### Bad Loan Funded Amount

```
SELECT SUM(loan_amount) AS Bad_Loan_Funded_Amount FROM bank_loan
WHERE loan_status = 'Charged Off'
```

Bad_Loan_Funded_Amount
65532225

### Bad Loan Amount Received

```
SELECT SUM(total_payment) AS Bad_Loan_Received_Amount FROM bank_loan
WHERE loan_status = 'Charged Off'
```

Bad_Loan_Received_Amount
37284763

## LOAN STATUS

```
SELECT
    loan_status AS Loan_Status,
    COUNT(id) AS Total_Applications,
    SUM(total_payment) AS Total_Amount_Recieved,
    SUM(loan_amount) AS Total_Funded_Amount,
    AVG(int_rate * 100) AS Interest_Rate,
    AVG(dti * 100) AS DTI
FROM
    bank_loan
GROUP BY loan_status
```

Loan_Status	Total_Applications	Total_Amount_Recieved	Total_Funded_Amount	Interest_Rate	DTI
Fully Paid	32145	411586256	351358350	11.6410707918092	13.1673507557434
Charged Off	5333	37284763	65532225	13.8785749318289	14.0047328005517
Current	1098	24199914	18866500	15.0993260800947	14.7243442736843

```
SELECT
    loan_status AS Loan_Status,
    SUM(total_payment) AS MTD_Total_Amount_Recieved,
    SUM(loan_amount) AS MTD_Total_Funded_Amount
FROM
    bank_loan
WHERE MONTH(issue_date) = 12
```

GROUP BY loan\_status

Loan_Status	MTD_Total_Amount_Recieved	MTD_Total_Funded_Amount
Fully Paid	47815851	41302025
Charged Off	5324211	8732775
Current	4934318	3946625

## OVERVIEW

### MONTHLY TREND BY ISSUE DATE

SELECT

```
MONTH(issue_date) AS Month_Number,  
DATENAME(MONTH, issue_date) AS Month_Name,  
COUNT(id) AS Total_Loan_Applications,  
SUM(loan_amount) AS Total_Funded_Amount,  
SUM(total_payment) AS Total_Received_Amount
```

FROM

bank\_loan

GROUP BY MONTH(issue\_date), DATENAME(MONTH, issue\_date)

ORDER BY MONTH(issue\_date)

Month_Number	Month_Name	Total_Loan_Applications	Total_Funded_Amount	Total_Received_Amount
1	January	2332	25031650	27578836
2	February	2279	24647825	27717745
3	March	2627	28875700	32264400
4	April	2755	29800800	32495533
5	May	2911	31738350	33750523
6	June	3184	34161475	36164533
7	July	3366	35813900	38827220
8	August	3441	38149600	42682218
9	September	3536	40907725	43983948
10	October	3796	44893800	49399567
11	November	4035	47754825	50132030
12	December	4314	53981425	58074380

### REGIONAL ANALYSIS BY STATE

SELECT

```
address_state AS State,  
COUNT(id) AS Total_Loan_Applications,  
SUM(loan_amount) AS Total_Funded_Amount,  
SUM(total_payment) AS Total_Received_Amount
```

FROM

bank\_loan

GROUP BY address\_state

ORDER BY address\_state

State	Total_Loan_Applications	Total_Funded_Amount	Total_Received_Amount
AK	78	1031800	1108570
AL	432	4949225	5492272
AR	236	2529700	2777875
AZ	833	9206000	10041986
CA	6894	78484125	83901234
CO	770	8976000	9845810
CT	730	8435575	9357612
DC	214	2652350	2921854
DE	110	1138100	1269136
FL	2773	30046125	31601905
GA	1355	15480325	16728040
HI	170	1850525	2080184
IA	5	56450	64482
ID	6	59750	65329
IL	1486	17124225	18875941
IN	9	86225	85521
KS	260	2872325	3247394
KY	320	3504100	3792530

## LOAN TERM ANALYSIS

```

SELECT
    term AS Term,
    COUNT(id) AS Total_Loan_Applications,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM
    bank_loan
GROUP BY term
ORDER BY term

```

Term	Total_Loan_Applications	Total_Funded_Amount	Total_Received_Amount
36 months	28237	273041225	294709458
60 months	10339	162715850	178361475

## EMPLOYEE LENGTH ANALYSIS

```

SELECT
    emp_length AS Employment_Length,
    COUNT(id) AS Total_Loan_Applications,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM
    bank_loan
GROUP BY emp_length
ORDER BY emp_length

```

Employment_Length	Total_Loan_Applications	Total_Funded_Amount	Total_Received_Amount
< 1 year	4575	44210625	47545011
1 year	3229	32883125	35498348
10+ years	8870	116115950	125871616
2 years	4382	44967975	49206961
3 years	4088	43937850	47551832
4 years	3428	37600375	40964850
5 years	3273	36973625	40397571
6 years	2228	25612650	27908658
7 years	1772	20811725	22584136
8 years	1476	17558950	19025777
9 years	1255	15084225	16516173

## LOAN PURPOSE ANALYSIS

```

SELECT
    purpose AS Purpose,
    COUNT(id) AS Total_Loan_Applications,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM
    bank_loan
GROUP BY purpose
ORDER BY purpose

```

Purpose	Total_Loan_Applications	Total_Funded_Amount	Total_Received_Amount
car	1497	10223575	11324914
credit card	4998	58885175	65214084
Debt consolidation	18214	232459675	253801871
educational	315	2161650	2248380
home improvement	2876	33350775	36380930
house	366	4824925	5185538
major purchase	2110	17251600	18676927
medical	667	5533225	5851372
moving	559	3748125	3999899
other	3824	31155750	33289676
renewable_energy	94	845750	898931
small business	1776	24123100	23814817
vacation	352	1967950	2116738
wedding	928	9225800	10266856

## HOME OWNERSHIP ANALYSIS

```

SELECT
    home_ownership AS Home_Ownership,
    COUNT(id) AS Total_Loan_Applications,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM
    bank_loan
GROUP BY home_ownership
ORDER BY home_ownership

```

Home_Ownership	Total_Loan_Applications	Total_Funded_Amount	Total_Received_Amount
MORTGAGE	17198	219329150	238474438
NONE	3	16800	19053
OTHER	98	1044975	1025257
OWN	2838	29597675	31729129
RENT	18439	185768475	201823056

*Note: We have applied multiple Filters on all the dashboards. You can check the results for the filters as well by modifying the query and comparing the results.*

*For e.g*

*See the results when we hit the Grade A in the filters for dashboards.*

```

SELECT
    purpose AS PURPOSE,
    COUNT(id) AS Total_Loan_Applications,
    SUM(Loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Amount_Received
FROM bank_Loan_data
WHERE grade = 'A'
GROUP BY purpose
ORDER BY purpose

```