

Presented by Prasant

Analysis of Credit card Data

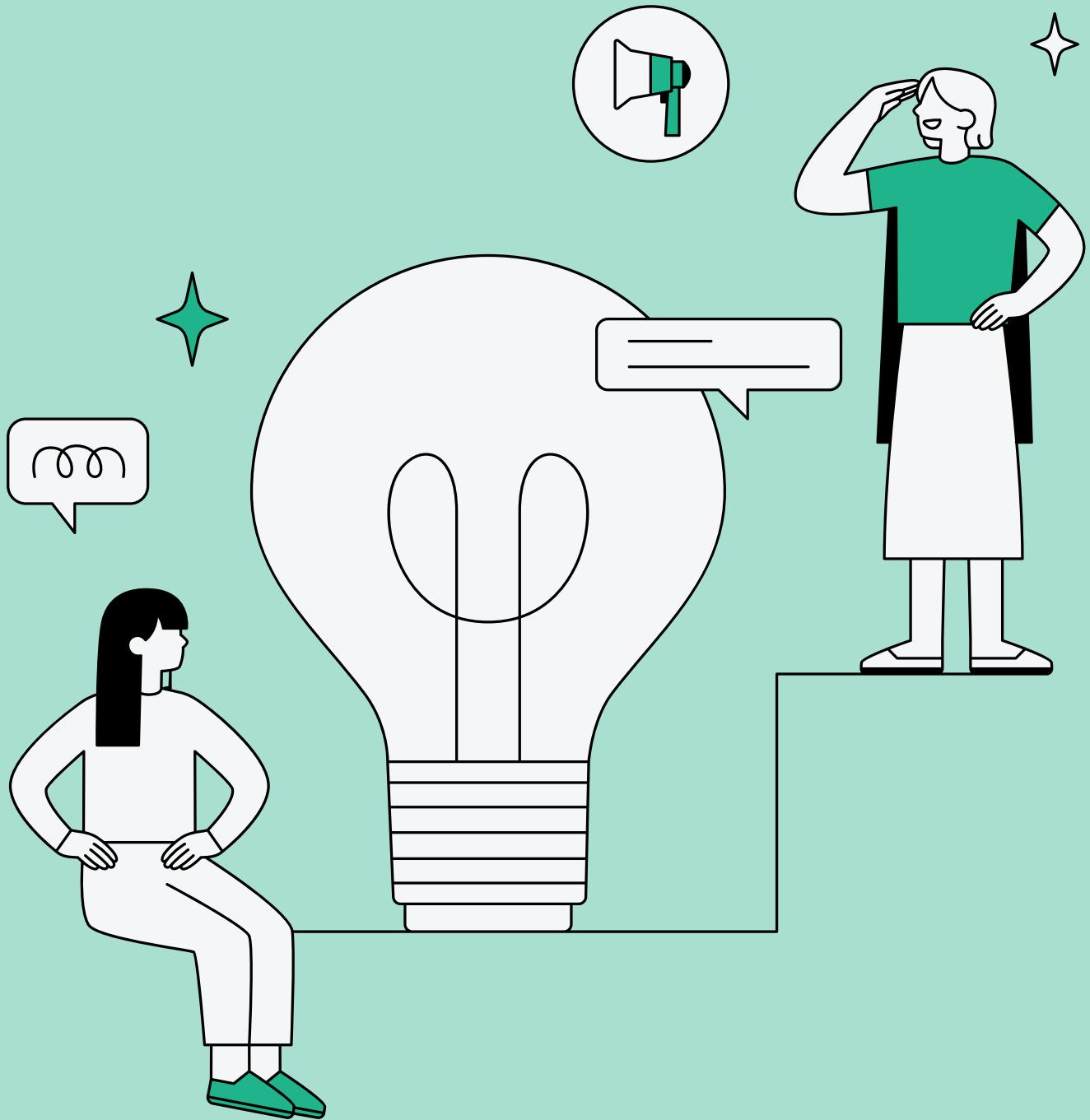
Trends and challenges

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Introduction to results analysis

A comprehensive data analysis integrating clients, accounts, transactions, loans, credit cards, and demographic information will enable the bank to identify good clients for targeted services and bad clients for risk management, thereby improving overall service quality and reducing potential losses.



Integrating Client and Account Data

```
-- Integrating Client and Account Data
SELECT c.client_id, c.birth_number, c.district_id AS client_district_id,
       a.account_id, a.district_id AS account_district_id, a.date AS account_creation_date, a.frequency
  FROM CLIENT c
 JOIN DISPOSITION d ON c.client_id = d.client_id
 JOIN ACCOUNT a ON d.account_id = a.account_id;
```

Output

	client_id	birth_number	client_district_id	account_id	account_district_id	account_creation_date	frequency
	693	350317	74	576	55	4446-07-11	POPLATEK MESICNE
	692	365111	74	576	55	4446-07-11	POPLATEK MESICNE
	845	535130	22	704	55	4446-07-11	POPLATEK MESICNE
	844	450114	22	704	55	4446-07-11	POPLATEK MESICNE



Integrating Client and Account Data

```
-- Integrating Client and Account Data
```

```
SELECT c.client_id, c.birth_number, a.account_id, l.loan_id, l.date AS loan_date,  
l.amount, l.duration, l.payments, l.status  
FROM CLIENT c  
JOIN DISPOSITION d ON c.client_id = d.client_id  
JOIN ACCOUNT a ON d.account_id = a.account_id  
JOIN LOAN l ON a.account_id = l.account_id;
```

	client_id	birth_number	account_id	loan_id	loan_date	amount	duration	payments	status
2	450204	2	4959	940105	80952	24	3373	A	
3	406009	2	4959	940105	80952	24	3373	A	
946	510806	790	5126	940724	208128	48	4336	B	
976	556119	813	5130	940511	24312	12	2026	A	
980	610930	816	5131	950108	48624	24	2026	A	
1029	545316	854	5138	950530	87216	48	1817	C	



Integrating Loans with Accounts and Clients

```
-- Integrating Loans with Accounts and Clients
```

```
SELECT c.client_id, c.birth_number, a.account_id, l.loan_id, l.date AS loan_date,  
| l.amount, l.duration, l.payments, l.status  
FROM CLIENT c  
JOIN DISPOSITION d ON c.client_id = d.client_id  
JOIN ACCOUNT a ON d.account_id = a.account_id  
JOIN LOAN l ON a.account_id = l.account_id;
```

	client_id	birth_number	account_id	loan_id	loan_date	amount	duration	payments	status
	2	450204	2	4959	940105	80952	24	3373	A
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	980	610930	816	5131	950108	48624	24	2026	A
	1029	545316	854	5138	950530	87216	48	1817	C

Integrating Transactions with Accounts and Clients

-- Integrating Transactions with Accounts and Clients

```
SELECT c.client_id, c.birth_number, a.account_id, t.trans_id,
t.date AS transaction_date, t.type AS transaction_type, t.amount, t.balance,
t.k_symbol, t.bank, t.account AS partner_account
FROM CLIENT c
JOIN DISPOSITION d ON c.client_id = d.client_id
JOIN ACCOUNT a ON d.account_id = a.account_id
JOIN TRANSACTION t ON a.account_id = t.account_id;
```

client_id	birth_number	account_id	loan_id	loan_date	amount	duration	payments	status
2	450204	2	4959	940105	80952	24	3373	A
3	406009	2	4959	940105	80952	24	3373	A
946	510806	790	5126	940724	208128	48	4336	B
976	556119	813	5130	940511	24312	12	2026	A
980	610930	816	5131	950108	48624	24	2026	A
1029	545316	854	5138	950530	950530	48	1817	C



Integrating Credit Cards with Clients and Accounts

```
-- Integrating Credit Cards with Clients and Accounts
```

```
SELECT c.client_id, c.birth_number, a.account_id, cc.card_id, cc.type AS card_type,  
cc.issued AS card_issued_date  
FROM CLIENT c  
JOIN DISPOSITION d ON c.client_id = d.client_id  
JOIN ACCOUNT a ON d.account_id = a.account_id  
JOIN CREDIT_CARD cc ON d.disp_id = cc.disp_id;
```

client_id	birth_number	account_id	card_id	card_type	card_issued_date
255	516011	212	40	classic	961013 00:00:00
548	371204	456	99	gold	961009 00:00:00
1039	806011	862	174	junior	941204 00:00:00
496	515521	411	88	classic	classic 104 00:00:00
295	390327	244	48	classic	980310 00:00:00

Transaction Patterns Analysis

```
-- Transaction Patterns Analysis
SELECT c.client_id, t.type AS transaction_type, COUNT(*) AS transaction_count,
SUM(t.amount) AS total_amount
FROM CLIENT c
JOIN DISPOSITION d ON c.client_id = d.client_id
JOIN ACCOUNT a ON d.account_id = a.account_id
JOIN TRANSACTION t ON a.account_id = t.account_id
GROUP BY c.client_id, t.type
ORDER BY c.client_id, t.type;
```

	client_id	transaction_type	transaction_count	total_amount
	2	PRIDEM	2	21336
	3	PRIDEM	2	21336
	12	PRIDEM	5	12905
	102	PRIDEM	2	4043
	103	PRIDEM	2	4043

Loan Repayment Analysis

```
-- Loan Repayment Analysis
SELECT c.client_id, COUNT(*) AS total_loans, SUM(l.amount) AS total_loan_amount,
SUM(l.payments) AS total_payments, l.status
FROM CLIENT c
JOIN DISPOSITION d ON c.client_id = d.client_id
JOIN ACCOUNT a ON d.account_id = a.account_id
JOIN LOAN l ON a.account_id = l.account_id
GROUP BY c.client_id, l.status
ORDER BY c.client_id, l.status;
```

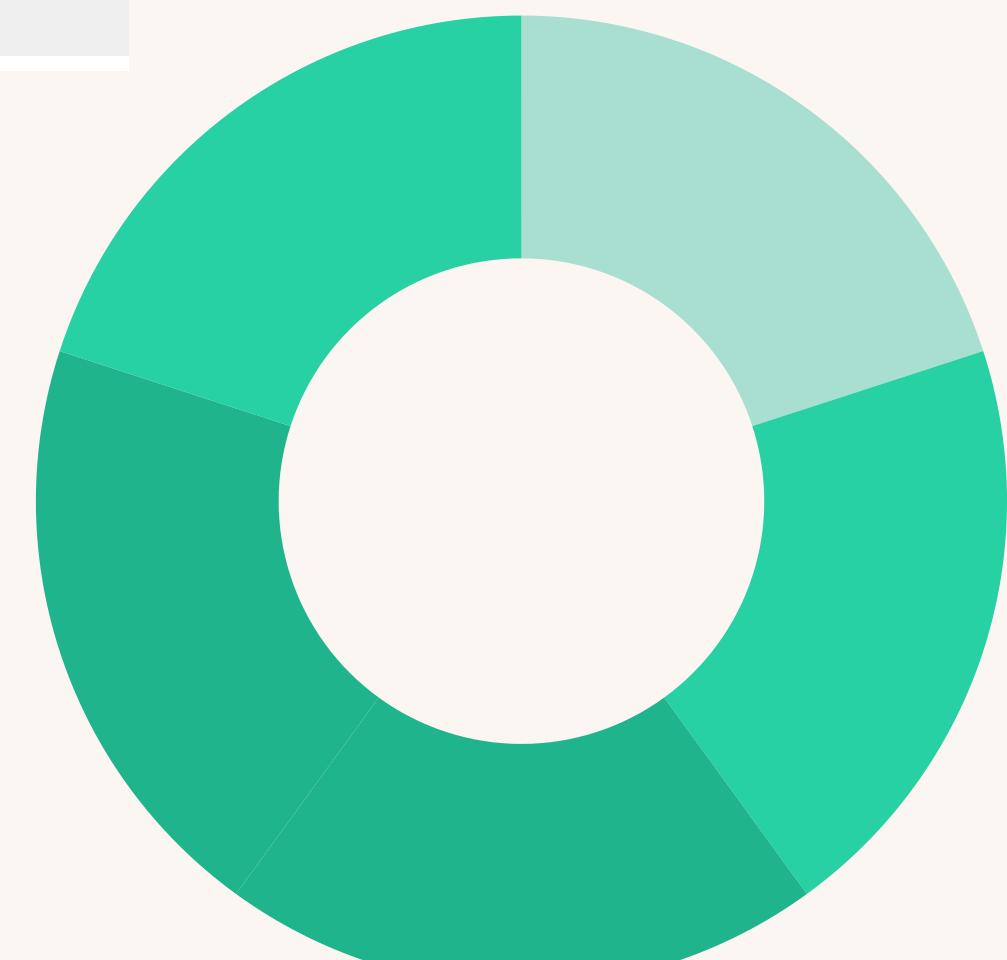
	client_id	total_loans	total_loan_amount	total_payments	status
▶	2	1	80952	3373	A
	3	1	80952	3373	A
	946	1	208128	4336	B
	976	1	24312	2026	A
	980	1	48624	2026	A
	1029	1	87216	1817	C



Credit Card Usage Analysis

```
-- Credit Card Usage Analysis  
SELECT c.client_id, cc.type AS card_type, COUNT(*) AS card_count  
FROM CLIENT c  
JOIN DISPOSITION d ON c.client_id = d.client_id  
JOIN CREDIT_CARD cc ON d.disp_id = cc.disp_id  
GROUP BY c.client_id, cc.type  
ORDER BY c.client_id, cc.type;
```

	client_id	card_type	card_count
	9	gold	1
	19	classic	1
	41	gold	1
	42	classic	1
	51	junior	1
	56	classic	1
	60	junior	1



Segment Clients Based on Loan Status

```
-- Segment Clients Based on Loan Status
```

- ```
SELECT c.client_id, l.status, COUNT(*) AS loan_count, SUM(l.amount) AS total_loan_amount
FROM CLIENT c
JOIN DISPOSITION d ON c.client_id = d.client_id
JOIN ACCOUNT a ON d.account_id = a.account_id
JOIN LOAN l ON a.account_id = l.account_id
GROUP BY c.client_id, l.status;
```

| client_id | card_type | card_count |
|-----------|-----------|------------|
| 9         | gold      | 1          |
| 19        | classic   | 1          |
| 41        | gold      | 1          |
| 42        | classic   | 1          |
| 51        | junior    | 1          |
| 56        | classic   | 1          |

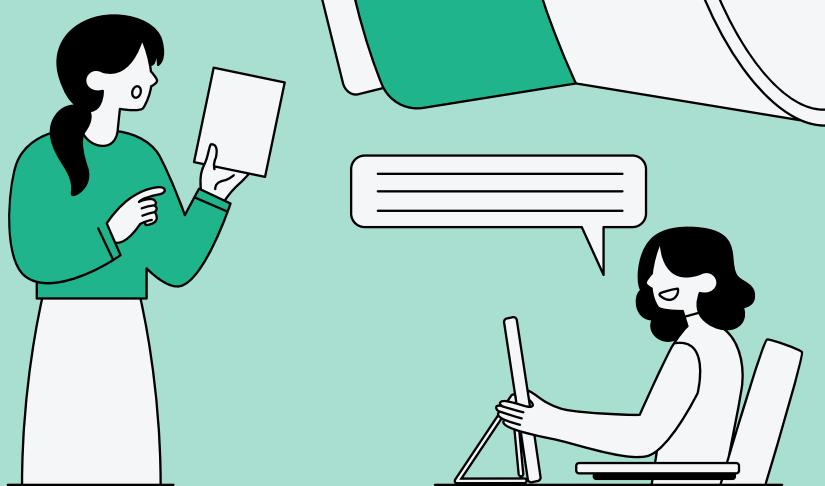


# Assign Risk Scores to Clients

```
-- Assign Risk Scores to Clients
```

```
SELECT c.client_id,
 CASE
 WHEN l.status = 'D' THEN 'High Risk'
 WHEN l.status = 'C' THEN 'Medium Risk'
 ELSE 'Low Risk'
 END AS risk_level
FROM CLIENT c
JOIN DISPOSITION d ON c.client_id = d.client_id
JOIN ACCOUNT a ON d.account_id = a.account_id
JOIN LOAN l ON a.account_id = l.account_id;
```

| client_id | risk_level  |
|-----------|-------------|
| 2         | Low Risk    |
| 3         | Low Risk    |
| 946       | Low Risk    |
| 976       | Low Risk    |
| 980       | Low Risk    |
| 1029      | Medium Risk |



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# Thank you very much!

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