Dashboard 1, Bank Loan Applications:

Bank Loan Applications Report

This report provides an analysis of the bank loan applications based on key metrics such as loan types, demographics, housing situations, employment details, education levels, and organization types. The visual analysis further highlights patterns and trends across these categories.

1. Loan Types and Repayment Trends:

- 90.48% of applicants prefer cash loans over revolving loans, showing a clear preference for liquidity.
- 91.93% of applicants successfully repaid their loans, demonstrating strong financial discipline, while only 8.07% defaulted.

2. Gender Distribution: 65.83% of loan applicants are female, showing that women dominate the applicant pool.

3. Age Distribution: The largest applicant groups are aged 30-40 (26.77%) and 40-50 (24.89%), indicating that people in their prime working years are the main borrowers.

4. Housing Situation: 88.72% of applicants own their homes, reflecting strong financial stability and asset ownership among loan seekers.

5.Family Status: The majority of applicants are married (63.88%), indicating that family stability may play a significant role in loan applications, followed by single (14.77%) and civil marriage (9.68%) statuses.

6. Employment Tenure: 44.32% of applicants have less than 5 years of employment, with over 83% having under 10 years, showing that early-career professionals make up a large portion of borrowers.

7. Employment Status: 51.63% of applicants are employed, with 23.28% being commercial associates, representing a workforce with diverse job roles.

8. Education Level: 70.99% of applicants have a secondary education, with very few holding academic degrees, indicating a gap in higher education among the applicant pool.

9. Occupation Types: Laborers form the largest group of applicants, followed by sales and core staff, showing that manual and service-related occupations are prominent among borrowers.

10. Organization Types: The largest applicant group works for Business Entity Type 3, with a significant number being self-employed, reflecting diverse employment structures among loan applicants.

Dashboard 2, Defaulters:

1. Overview Statistics: Out of 3,07,511 applicants, 24,825 (8.07%) defaulted on their loans. The total goods price is 165.54B, and the total credit amount is 184.21B, with an average income of 1,68,798 and an average annuity of 27,109.

2. Contract Type vs Target: 1,604 (6.46%) of the defaulters have revolving loans, while 22,221 (93.54%) are linked to cash loans. Although revolving loans have a higher default percentage, cash loans represent the majority.

3. Target by Gender: 57.08% of defaulters are female (14,170), and 42.92% are male (10,655). Despite fewer male applicants, their default rate is almost equal to females.

4. Target by Age: The highest proportion of defaulters are aged 30-40 years (31.77%), followed by 40-50 years (23.59%), and 20-30 years (20.78%). These groups represent the bulk of defaults, with older individuals above 60 having a lower share (7.05%).

5. Target by Family Status: Married individuals constitute 59.82% of defaulters (14,850), while single individuals represent 17.95% (4,457). Civil marriage defaulters make up 11.93%, showing a trend of defaults within long-term relationships.

6. Target by Housing Type: Most defaulters live in houses or apartments (85.69%, 21,272), while 6.99% (1,736) live with their parents. Only a small portion (0.69%) reside in office apartments, indicating that ownership doesn’t prevent defaults.

7. Target by Education Type: Individuals with secondary/special education make up 78.65% (19,524) of defaulters, while higher education holders form 16.15% (4,009). Lower education levels correlate with higher default rates.

8. Target by Income Type: 61.33% of defaulters are working individuals (15,224), followed by commercial associates (21.59%, 5,360) and pensioners (12.01%, 2,982). Even employed individuals face high default risks.

9. Target by Employment Year: 58.04% of defaulters (14,409) have worked for 0-5 years, while 31.31% (7,772) have 5-10 years of employment. Those in the early stages of their careers are most at risk of defaulting.

10. Target by Occupation Type: Laborers form the largest group of defaulters at 48.81% (12,116), followed by sales staff (12.46%, 3,092) and drivers (8.49%, 2,107). Manual laborers are highly vulnerable to loan defaults.

11. Target by Organization Type: Business Entity Type 3 employees make up 33.44% (6,323) of defaulters, followed by self-employed individuals at 20.67% (3,908). These types of organizations see the highest default rates.

Dashboard 2, Repayers:

1. **Key Overview of Repayers**: Out of 3,07,511 applicants, 91.93% (2,82,686) are repayers, showcasing a high repayment rate among loan applicants.

2. **Repayers by Gender**: Female repayers dominate at 66.60% (1,88,278), compared to 33.40% (94,404) for males, indicating that women are more consistent in loan repayments.

3. **Repayers by Age**: The largest share of repayers (26.33%) are aged 30-40 years (74,420), followed by 40-50 years (25%, 70,685), highlighting mid-age groups as the most reliable in loan repayment.

4. **Repayers by Contract Type**: Cash loans are repaid by 90.21% (2,55,011) of repayers, whereas revolving loans account for 9.79% (27,675), making cash loans a more common choice.

5. **Repayers by Family Status**: Married individuals lead in repayments with 64.23% (1,81,582), followed by singles at 14.50% (40,987), showing family stability as a strong factor in loan repayment.

6. **Repayers by Housing Type**: Most repayers (89.00%, 2,51,596) live in owned houses/apartments, further associating home ownership with financial stability in loan repayments.

7. **Repayers by Education Type**: Repayers with secondary/special education form the largest group at 70.35% (1,98,867), while higher education holders make up 25.06% (70,854), reinforcing education as a key factor in loan repayment behavior.

8. **Repayers by Income Type**: Working individuals make up 50.78% (1,43,550) of repayers, followed by commercial associates at 23.44% (66,257), with pensioners at 18.53% (52,380), demonstrating stable income as a major factor in repayments.

9. **Repayers by Employment Years**: Individuals with 0-5 years of employment experience represent 43.12% (1,21,900) of repayers, highlighting early-career professionals as significant contributors to repayments.

10. **Repayers by Occupation Type**: Laborers dominate the repayment category at 49.33% (1,39,461), followed by sales staff at 10.26% (29,010), indicating that blue-collar workers are a major repayment group.

11. **Repayers by Organization Type**: Business Entity Type 3 employees constitute 28.60% (61,669) of repayers, followed by those working in "XNA" organizations (24.29%, 52,384), and self-employed individuals (16.00%, 34,504), showing that certain business types have higher repayment reliability.

Dashboard 3, Credit and Income Correlations:

1. **Defaulters and Repayers**: 91.93% of applicants successfully repaid their loans, showing a strong repayment trend, while 8.07% defaulted.

2. **Credit Amount vs. Goods Price (Scatter Plot)**: There is a strong positive correlation between higher credit amounts and higher-priced goods, indicating applicants take out more credit for expensive purchases.

3. **Credit Amount vs. Income Total (Scatter Plot)**: No clear correlation exists between credit amounts and income levels, with many applicants taking substantial credit amounts regardless of income.

4. **Children Count Distribution (Bar Chart)**: The majority of applicants (198,762) have no children, and family size appears to have little impact on credit amounts taken.

5. Annuity Amount vs. Income Total Based on Days Employed (Scatter Plot): There is no clear trend, with most applicants falling into lower annuity and income ranges, though a few high-income outliers take out higher annuities.

Dashboard 4, Comprehensive Financial Overview:

1. Credit Amount and Goods Price by Contract Type: Cash loans dominate, contributing to the majority of credit ($174.72 billion) and goods price ($155.97 billion), while revolving loans have a much smaller share.

2. Credit Amount and Goods Price by Gender: Females account for more credit ($120.00 billion) and goods price ($107.77 billion) than males, highlighting their significant presence in the credit market.

3. Credit Amount and Goods Price by Age and Gender: The 30-50 age group holds the highest credit and goods price amounts, with females consistently leading across all age ranges.

4. Annuity and Income by Age and Gender: Females have higher annuities and total income than males, with the 30-40 age group showing peak financial activity for both genders.

5. Credit Amount and Goods Price by Defaulters and Repayers: Repayers dominate with $170.36 billion in credit and $153.40 billion in goods price, while defaulters make up a much smaller portion of the total.

6. Credit Amount and Goods Price by Employment Range: Applicants with 0-10 years of employment contribute the majority of credit and goods prices, while longer employment ranges show a significant decline in credit activity.

7. Income and Credit Amount by Age and Gender: Income and credit amounts are highest for both males and females in the 30-40 age range, with females earning consistently more across all age groups.

Dashboard 5, Comprehensive Financial Overview 2:

1. Credit Amount and Goods Price by Housing Type: Homeowners dominate credit and goods price values, contributing $165.13 billion in credit and $148.53 billion in goods price, while individuals living with parents or renting apartments contribute significantly less.

2. Credit Amount and Goods Price by Family Status: Married individuals lead with $126.34 billion in credit and $113.91 billion in goods price, far exceeding single, separated, and widowed applicants.

3. Credit Amount and Goods Price by Education Type: Individuals with secondary education hold the majority of credit ($124.74 billion) and goods price values ($111.35 billion), while those with academic degrees contribute less.

4. Credit Amount and Goods Price by Occupation Type: Laborers account for the highest credit ($18.99 billion) and goods price values ($17.00 billion), followed by managers and sales staff.

5. Credit Amount and Goods Price by Organization Type: Business Entity Type 1 dominates credit and goods price markets, contributing $38.25 billion in credit, with self-employed individuals also playing a significant role.

6. Credit Amount and Goods Price by Income Type: Working individuals and commercial associates make up the majority of credit and goods price values, with working individuals contributing $91.67 billion in credit and $82.21 billion in goods price.

Dashboard 6, Previous Application Status Based on Applicants:

1. Applicants by Client Type: Visual depicts that 77.12% are new clients, highlighting a strong influx of new borrowers.

2. Applicants by Contract Type (Previous): Illustrates dominance of consumer loans at 87.48%, followed by cash loans at 55.73%.

3. Applicants by Contract Status: Shows a high approval rate of 94.30%, though cancellations and refusals are significant.

4. Applicants by Portfolio: Visualizes cash products as leading at 48.52%, followed by XNA and POS.

5. Applicants by Product Type: Cross-sell dominates at 49.20%, showing customer preference for bundled offerings.

6. Applicants by Yield Group: Shows over 53% of applicants in the high-yield group, indicating profitability potential.

7. Applicants by Cash Loan Purpose: Unspecified loan purposes (XAP) dominate, but repairs and urgent needs follow.

8. Applicants by Goods Category: Mobile phones and consumer electronics are the top specified categories after XNA.

9. Applicants by Seller Industry: Consumer electronics and connectivity sectors lead in seller industries, reflecting tech-driven purchasing.

10. Applicants by Payment Type: Majority prefer bank-based cash payments, showing reliance on traditional banking.

11. Applicants by Product Combination: POS products for household and mobile purchases with interest are most common.

Conclusion on Bank Loan Applications Data:

The data from the various dashboards offers comprehensive insights into the loan application trends, default patterns, and repayment behavior across several categories. Below are the key takeaways:

1. **Preference for Cash Loans**: A majority of applicants (90.48%) prefer cash loans over revolving loans, indicating a strong demand for liquid financial products. Cash loans dominate both in terms of application volume and repayment success, despite also representing the majority of defaults.
2. **High Repayment Rate**: With 91.93% of applicants successfully repaying their loans, the data reflects strong financial discipline among borrowers. This trend is consistent across demographics, including gender, age, and family status.
3. **Dominance of Female Applicants**: Women make up 65.83% of the loan applicants and are more consistent in repayment than men, leading the credit market in terms of both volume and repayment behavior.
4. **Age and Employment Factors**: The 30-40 and 40-50 age groups are the largest segments of both borrowers and defaulters, indicating that prime working-age individuals are highly active in the credit market. Additionally, borrowers with less than 5 years of employment (early-career professionals) are at higher risk of default.
5. **Housing and Family Stability**: Most applicants own their homes (88.72%) and are married (63.88%), indicating that financial stability and family status play a significant role in both loan applications and successful repayment. Homeownership is linked to more reliable repayment behavior.
6. **Income and Occupation Trends**: The largest share of applicants comes from working individuals, with laborers being the most prominent occupation group. This shows that blue-collar workers represent a significant portion of the applicant pool, but they also account for the majority of defaults, making them a vulnerable group.
7. **Education and Default Risk**: Applicants with secondary or special education dominate the applicant pool and also make up the majority of defaulters, highlighting a potential correlation between lower education levels and higher default risk. This suggests a need for financial education programs aimed at borrowers with lower academic qualifications.
8. **Defaulters vs. Repayers**: Despite a small default rate of 8.07%, the financial impact of defaults is notable, with cash loans making up most of the defaults. The defaulter data suggests that individuals with less stable employment and lower education levels are at greater risk, which could inform risk assessment strategies for lenders.
9. **Product and Industry Insights**: Consumer electronics, mobile phones, and connectivity products are the most financed goods, pointing to a technology-driven market. Applicants also heavily rely on traditional banking methods for payment, showing trust in conventional financial systems.
10. **Opportunities for Financial Institutions**: The dominance of cross-sell products, high-yield segments, and multi-product bundles presents financial institutions with lucrative opportunities. Leveraging these insights, banks can design products tailored to key demographics, such as married homeowners or mid-career professionals, while addressing the vulnerabilities of at-risk groups like laborers and early-career workers.

Strategic Recommendations:

- **Targeted Risk Mitigation**: Develop loan products with more flexible terms for vulnerable segments (e.g., laborers, early-career professionals) to reduce defaults.
- **Promote Cross-Sell Offerings**: Focus on cross-sell product combinations, which are highly popular and offer greater profitability.
- **Financial Literacy Programs**: Launch educational initiatives to improve financial understanding among applicants with lower education levels to reduce default rates.
- **Customer Retention Strategies**: Given the high percentage of new clients, banks should focus on retention efforts to encourage repeat applications and build long-term relationships with borrowers.

This data-driven approach can help lenders refine their offerings and risk assessment models, improving overall portfolio performance and customer satisfaction.