Loan Grade Distribution with Average Interest Rate and Default Rate
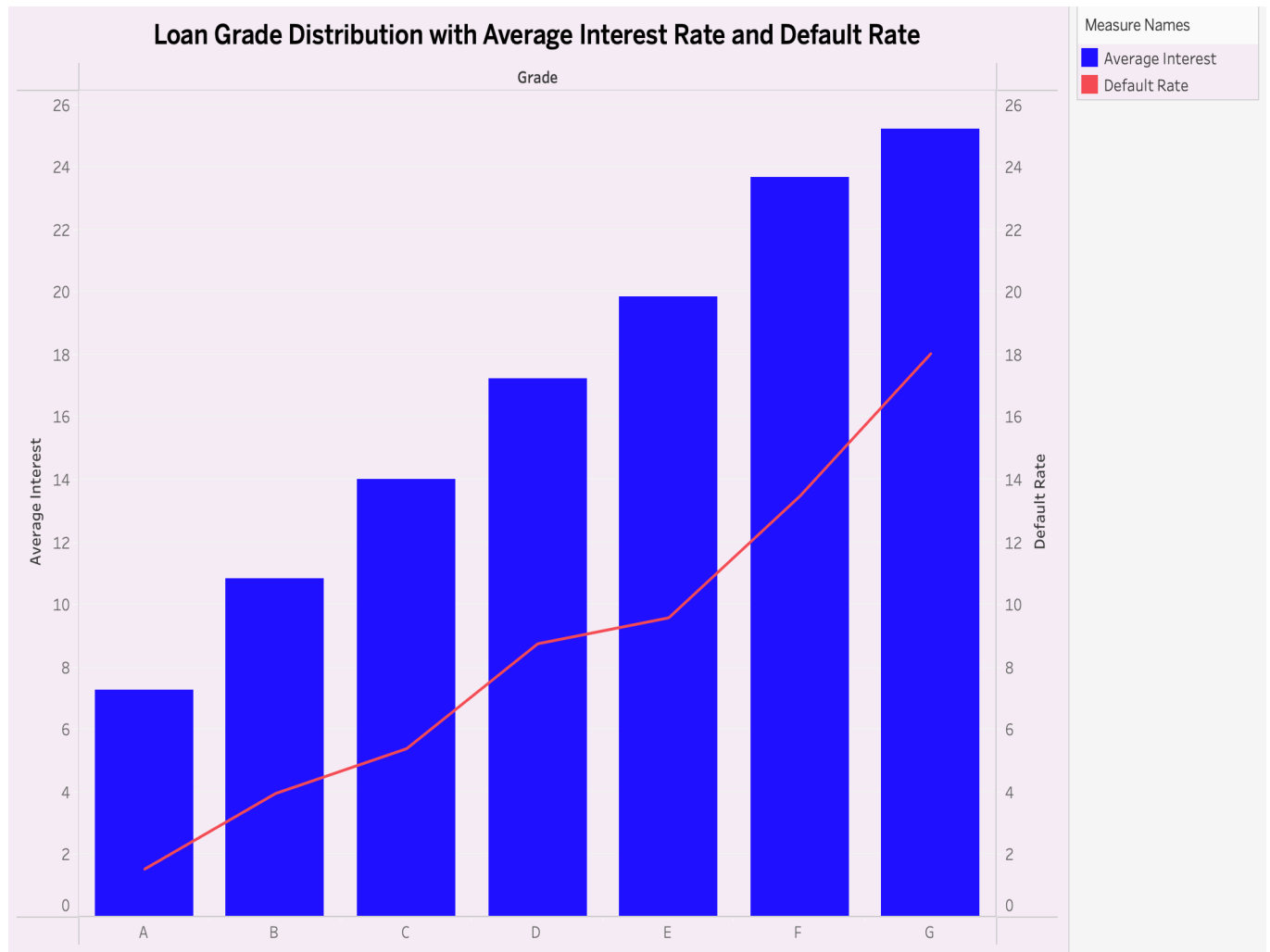

Loan Grade Distribution with Average Interest Rate and Default Rate

Insights:

- **Average Interest Rate**: Typically, higher grades (like A or B) have lower average interest rates, indicating lower perceived risk by the lender.
- **Default Rate**: The default rate tends to increase as the grade decreases (from A to G). This suggests that lower grades are associated with a higher risk of default.

Default Rates by Purpose and Grade
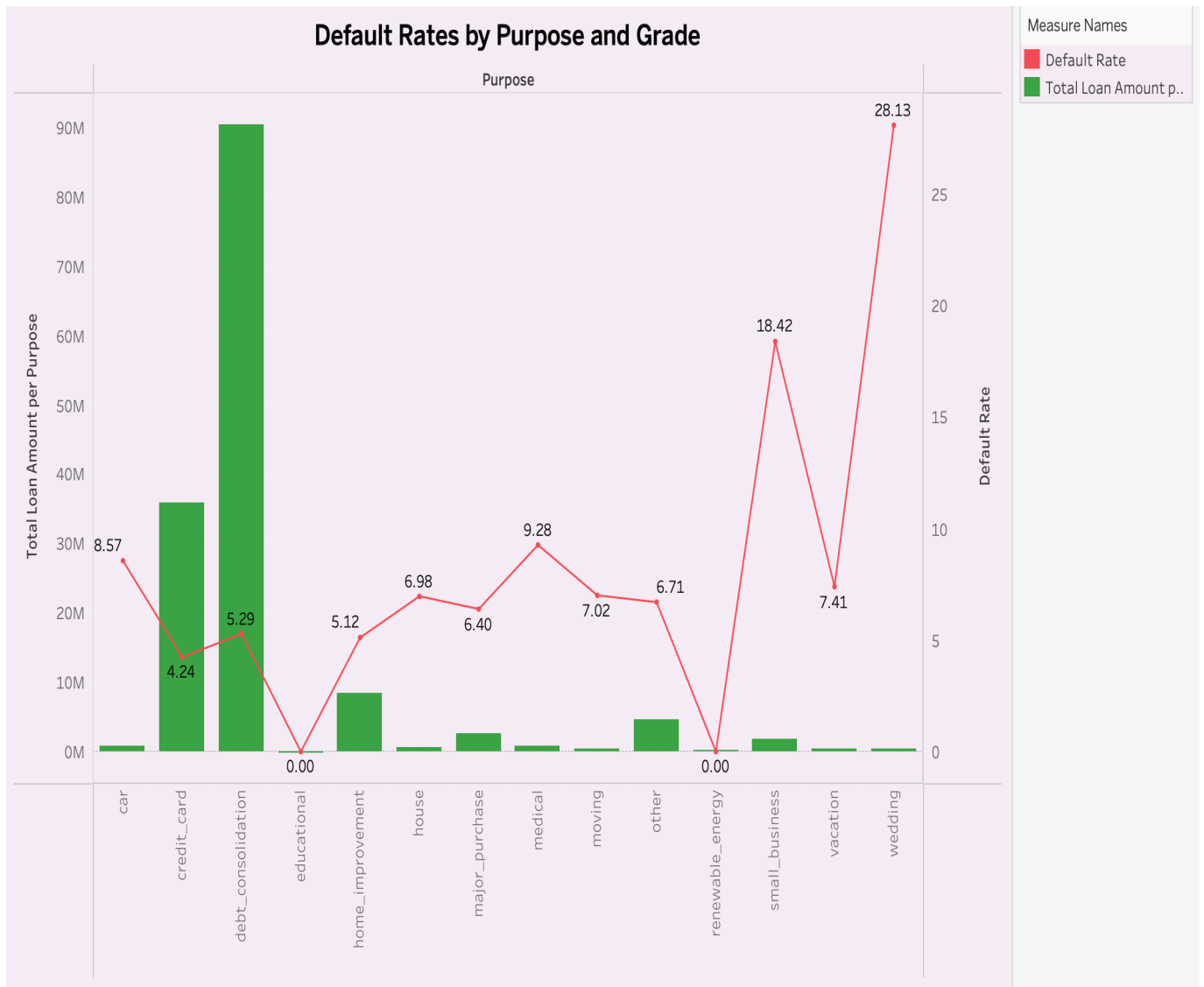
Key Insights:

- **High Volume, Lower Risk**: Some loan purposes, like 'debt_consolidation', might have a high total loan amount but relatively lower default rates. This suggests these are popular loan purposes and are comparatively safer for lenders.
- **High Risk Purposes**: Conversely, if a loan purpose has a relatively high default rate (higher points on the red line), it indicates a higher risk associated with that purpose, regardless of the total loan amount.
- **Balancing Act**: Lenders need to balance the demand for loans for each purpose (total loan amount) with the associated risk (default rate).

Annual Income vs. Debt-to-Income Ratio by Home Ownership

Annual Income vs. Debt-to-Income Ratio by Home Ownership
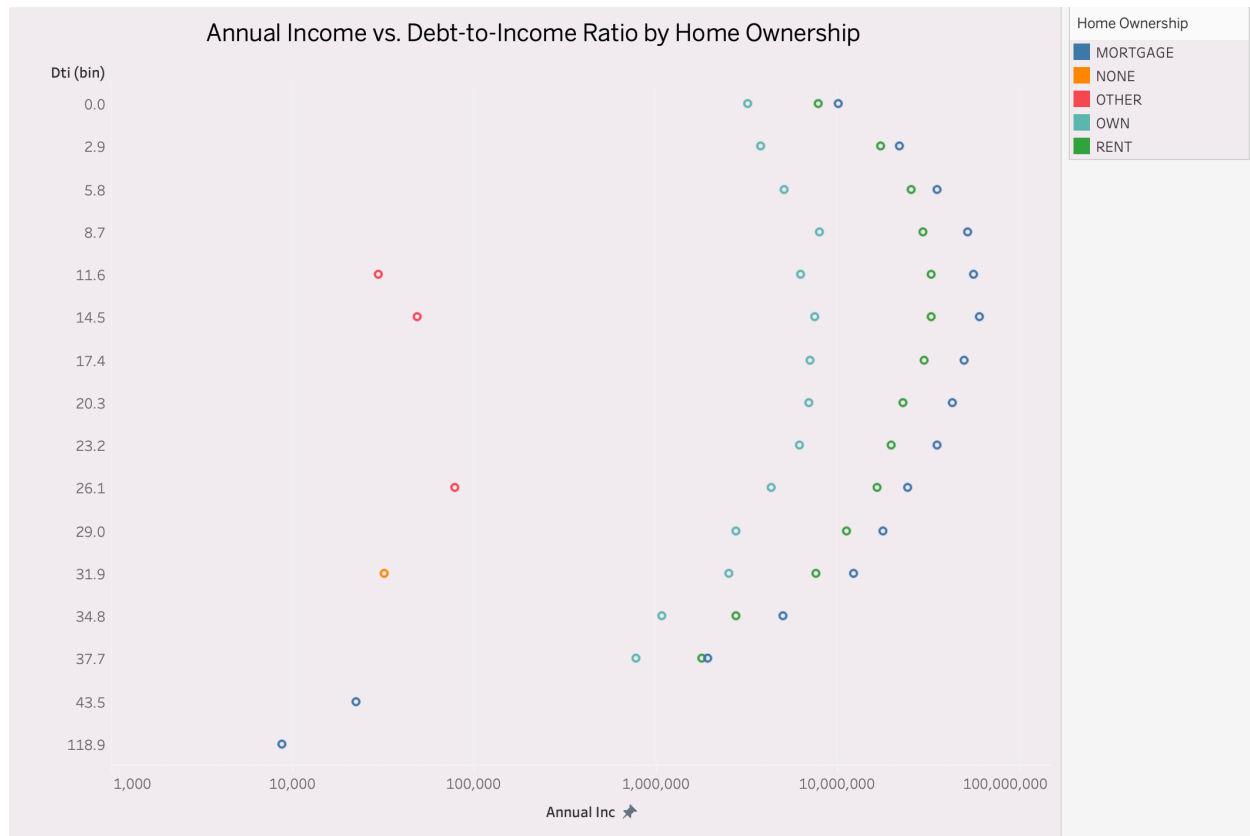
Key Insights:

- **Income and DTI Relationship**: Generally, we might expect to see lower DTI ratios at higher income levels, indicating better financial health. However, this plot can reveal if and how this pattern varies across different home ownership statuses.
- **Home Ownership Impact**: The plot can show if certain home ownership categories, like owning a home or having a mortgage, are associated with specific trends in income and DTI.
- **Diverse Financial Situations**: The spread of points for each home ownership category can indicate the diversity of financial situations within each group.

Based on the analysis of customers who defaulted on their loans, here are some key characteristics:

1. **Average Annual Income**: $66,019.00
2. **Average Debt-to-Income Ratio (DTI)**: 18.39
3. **Average Interest Rate**: 16.14%
4. **Average Loan Amount**: $14,899.91
5. **Most Common Purpose for the Loan**: Debt Consolidation
6. **Most Common Loan Grade**: Grade C
7. **Most Common Home Ownership Status**: Rent
8. **Average Employment Length**: 10+ years