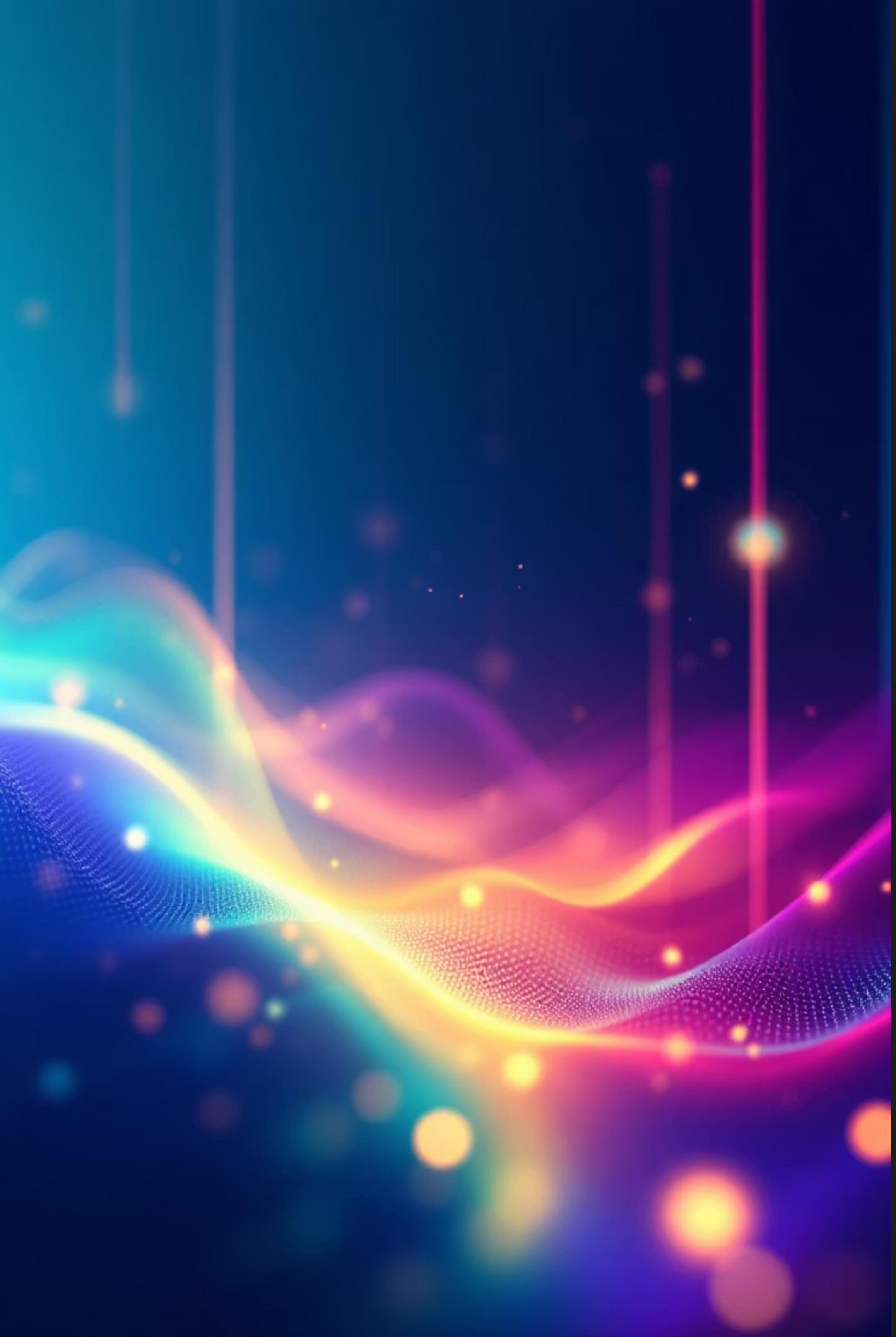
Customer Churn Analysis Report

This report details a comprehensive analysis of customer churn, identifying key drivers and offering strategic insights for retention. We've examined various demographic, service, and payment factors to understand why customers discontinue service.



Data Preparation: Cleaning and Transformation

1

Standardization

Column names were converted to lowercase for consistency across the dataset.

2

Encoding

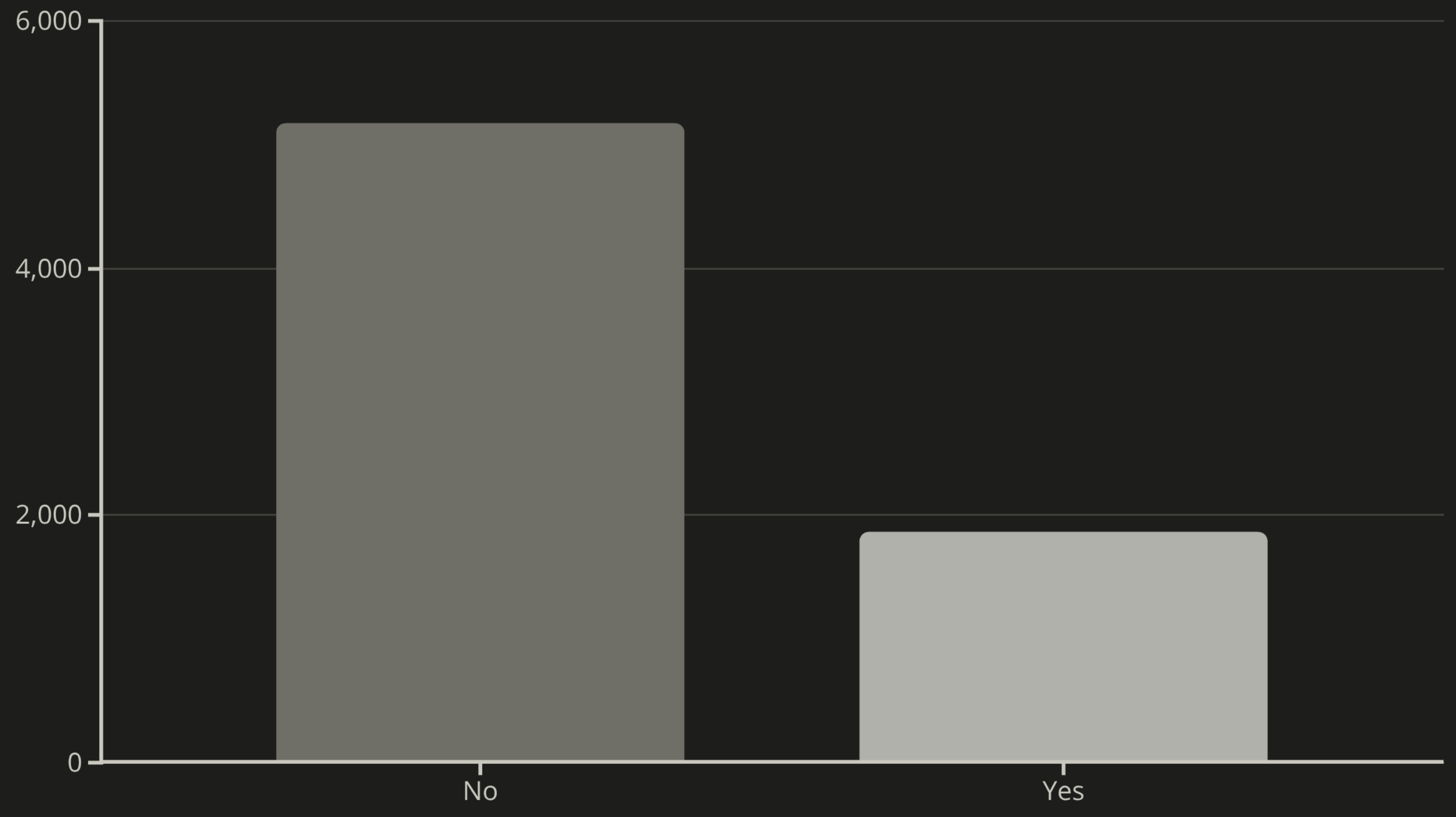
The 'SeniorCitizen' column was transformed from binary (0/1) to categorical (No/Yes) for clarity.

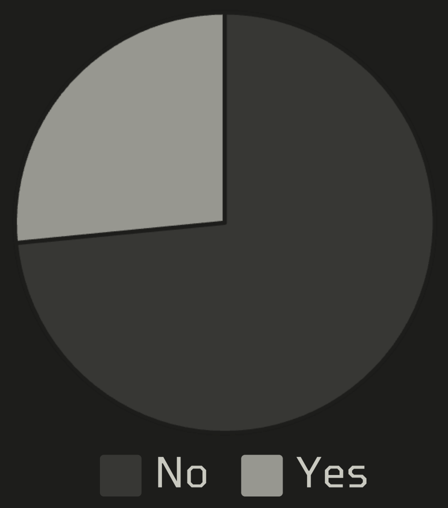
3

Missing Values

Blank values in 'TotalCharges' (where 'Tenure' was 0) were replaced with 0, and the column was converted to float.

Overall Churn Distribution



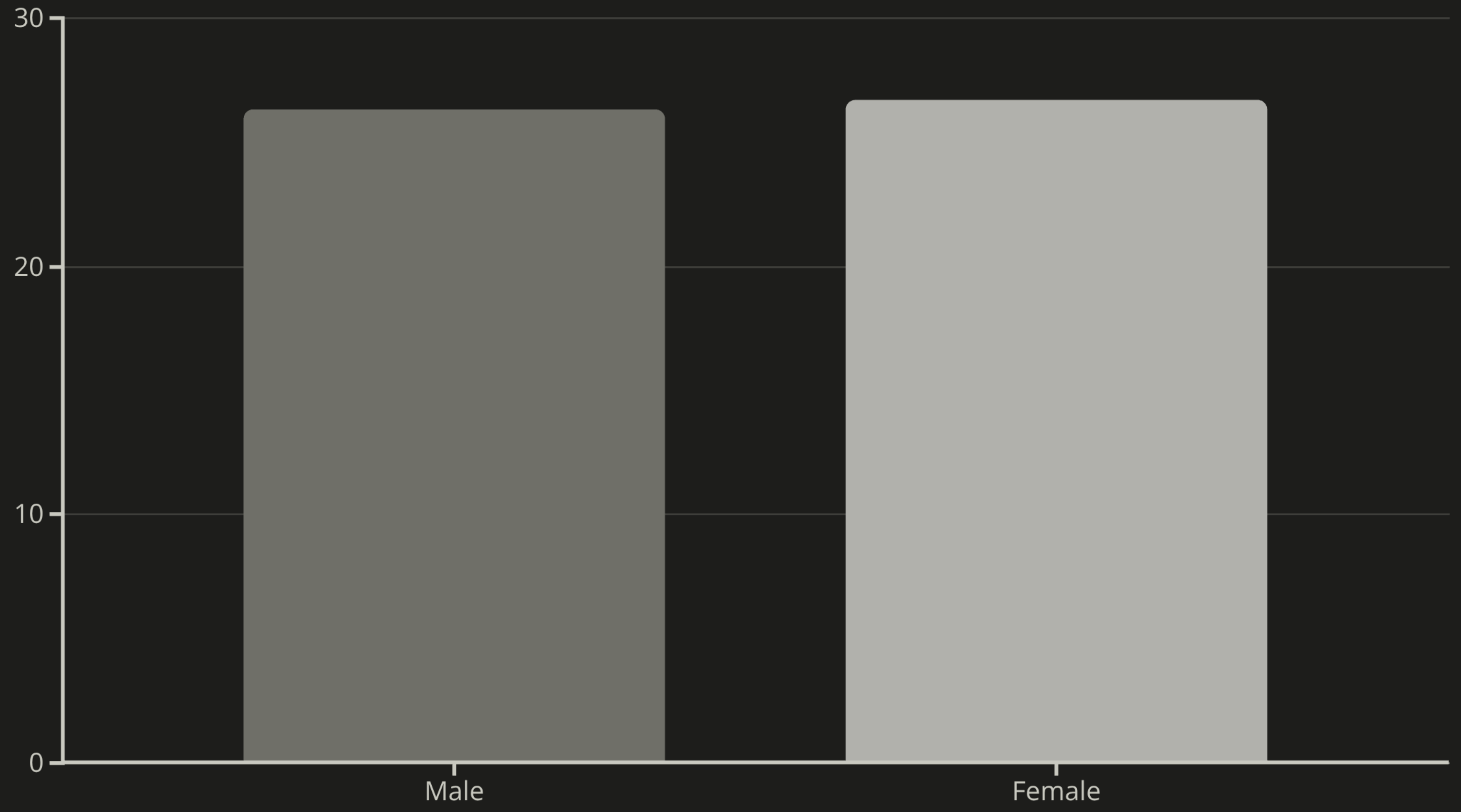


The analysis reveals that **26.54% of the total customer base has churned**, indicating a significant proportion of customers discontinuing service. This finding highlights the importance of understanding the underlying factors contributing to this churn rate.

Demographic Analysis: Gender and Senior Citizen Status

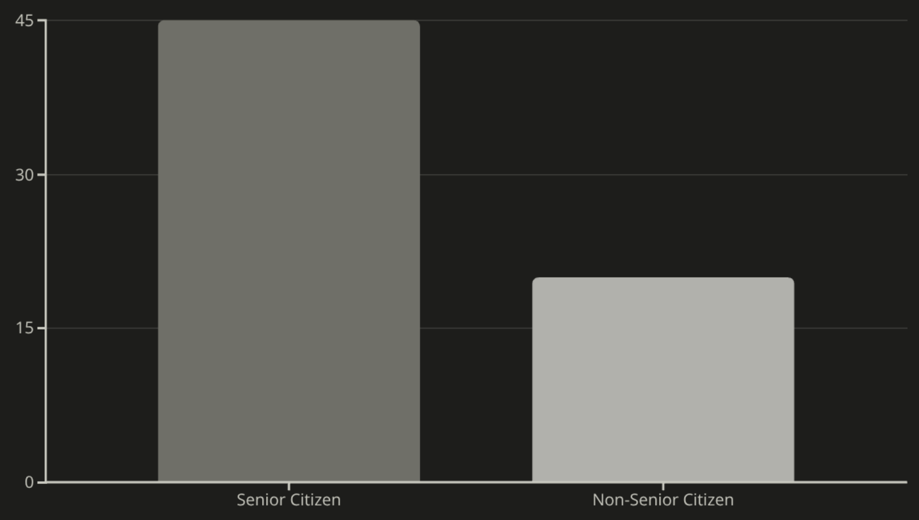
Gender Impact

Churn rates are approximately equal between males and females, suggesting gender is not a significant differentiator in customer retention.

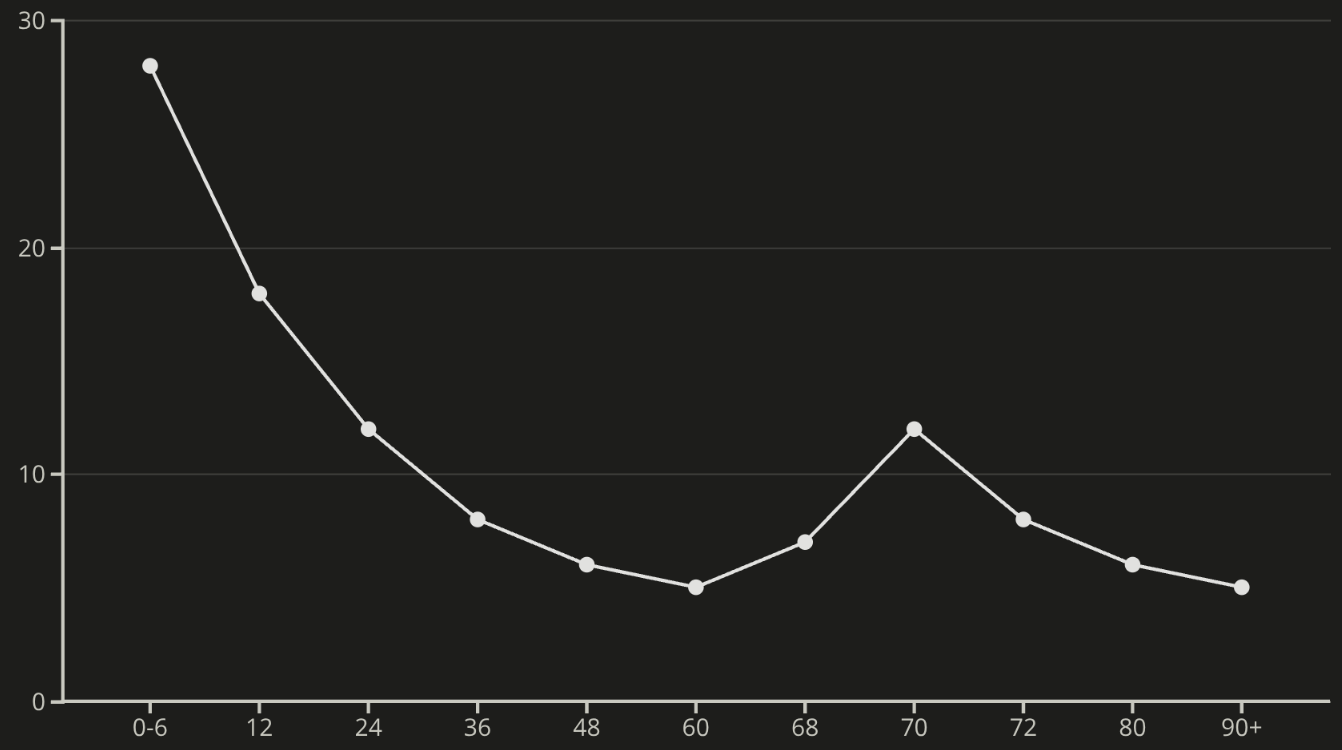


Senior Citizen Impact

There is a higher churn rate among senior citizens compared to the younger demographic, indicating this group may require targeted retention strategies.



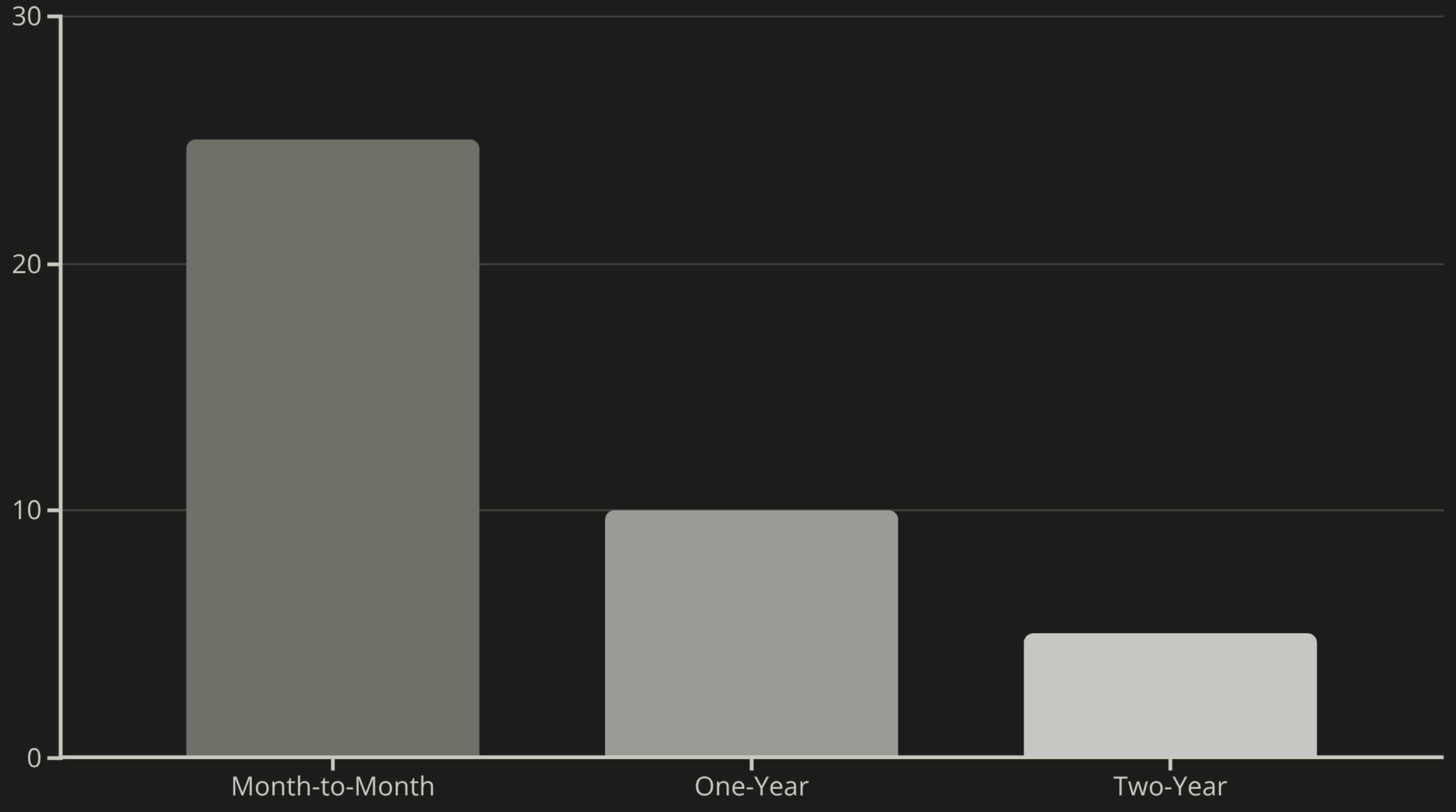
Tenure Analysis: Length of Service and Retention



Customers with shorter tenure churn at a significantly higher rate, while long-term customers demonstrate greater stability. This suggests that the initial period of customer engagement is critical for retention efforts.

Finding: High initial churn rate decreases over time, with a spike around 70 months.

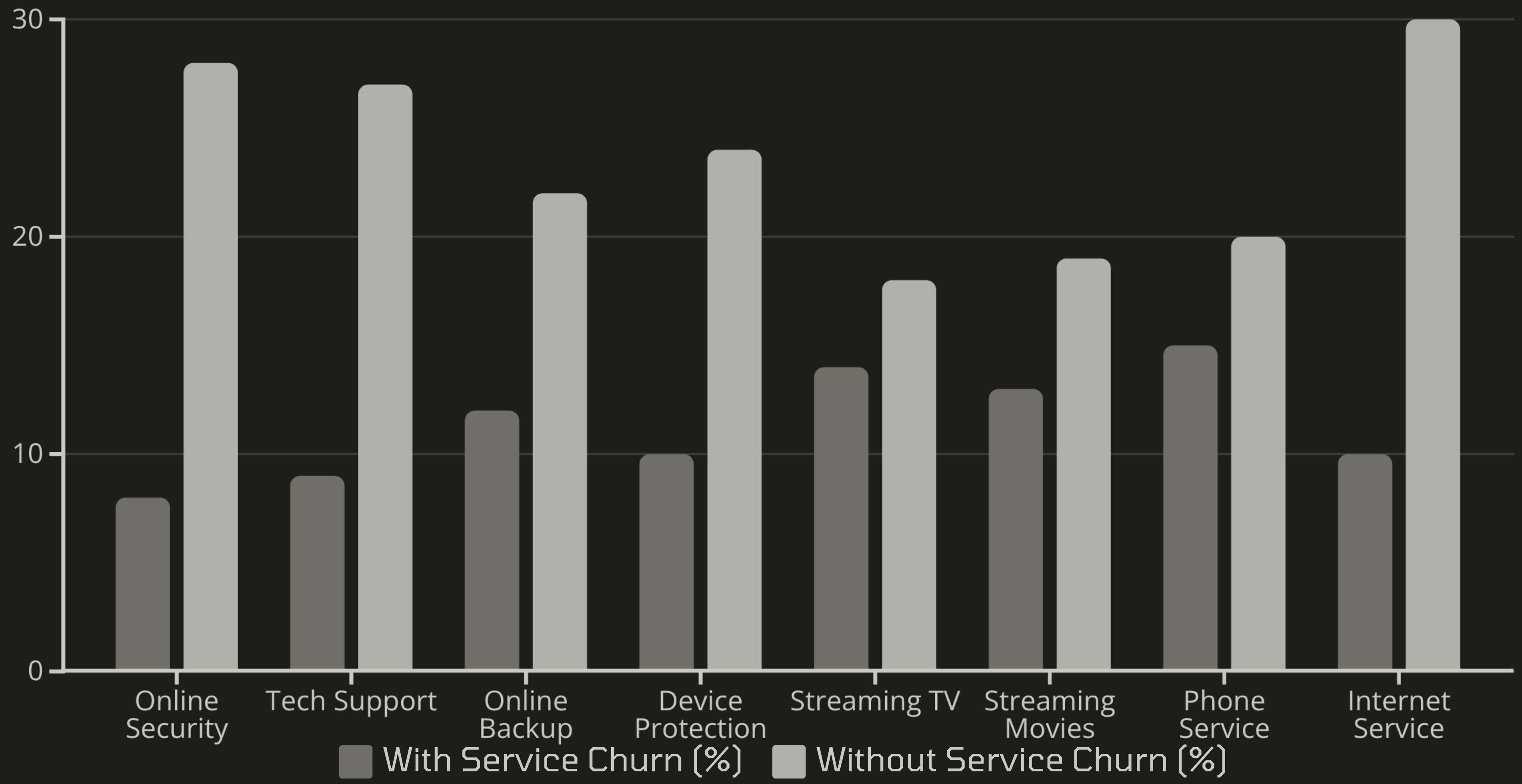
Contract Type Analysis: Month-to-Month vs. Long-Term



Customers with Month-to-Month contracts have the highest likelihood of churning. This contract type offers flexibility but comes with increased churn risk.

Conversely, customers with One-Year or Two-Year contracts are significantly more stable, indicating that longer commitments foster greater loyalty.

Service and Category Analysis: Identifying Risk Factors



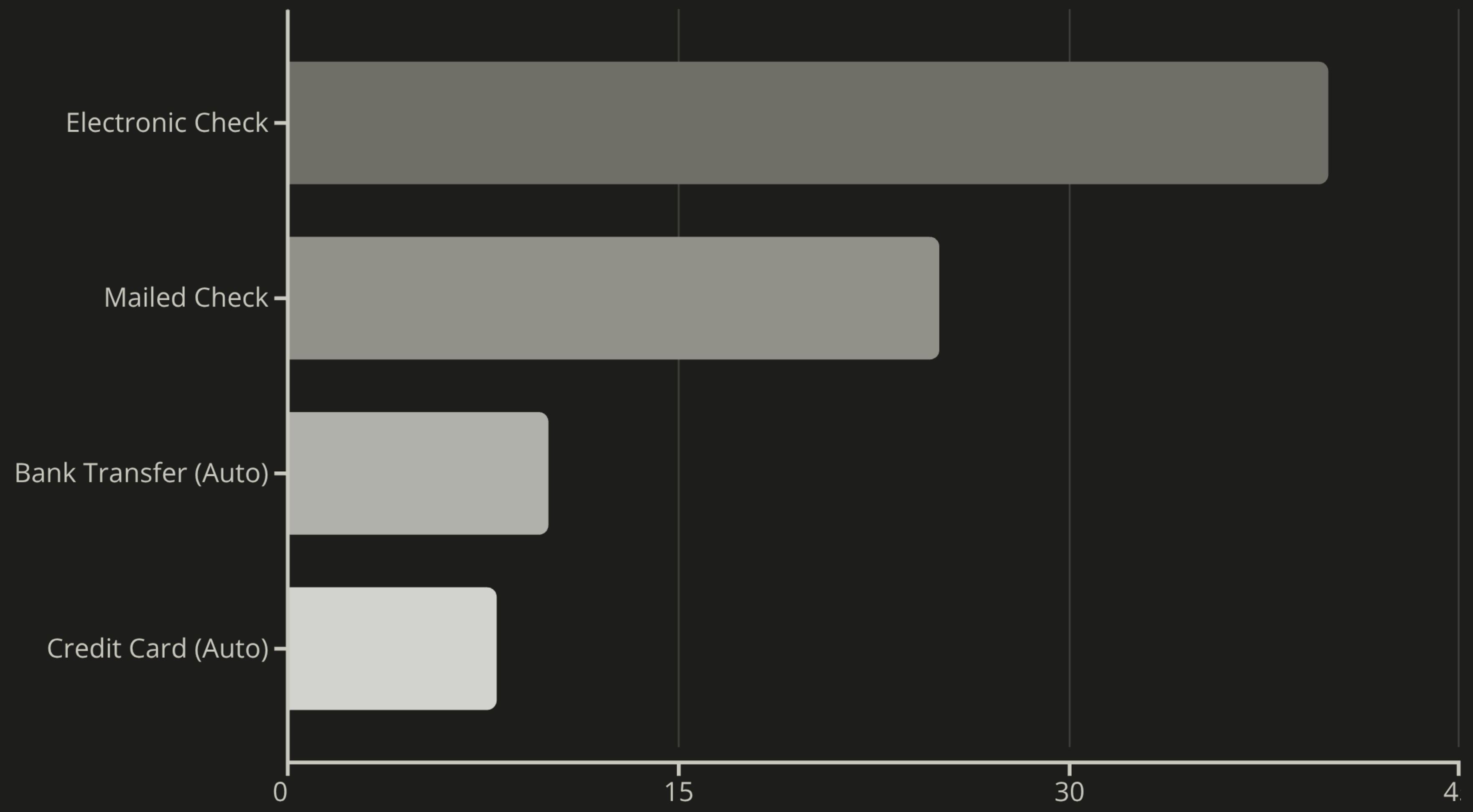
High Churn Risk

Customers without Online Security or Tech Support services show higher churn rates.

Low Churn Risk

Customers with partners or dependents tend to have lower churn rates, suggesting a stronger tie to the service.

Payment Method Analysis: Impact on Retention



High Risk: Electronic Check

Customers paying via Electronic Check exhibit the highest churn rate, indicating a potential friction point in their payment experience.

Low Risk: Automatic Payments

Customers using automatic payment methods (Bank Transfer, Credit Card) have the lowest churn rates, suggesting convenience and automation contribute to retention.

Key Churn Drivers

Contract Type

Month-to-month contracts are a primary driver of churn.

Payment Method

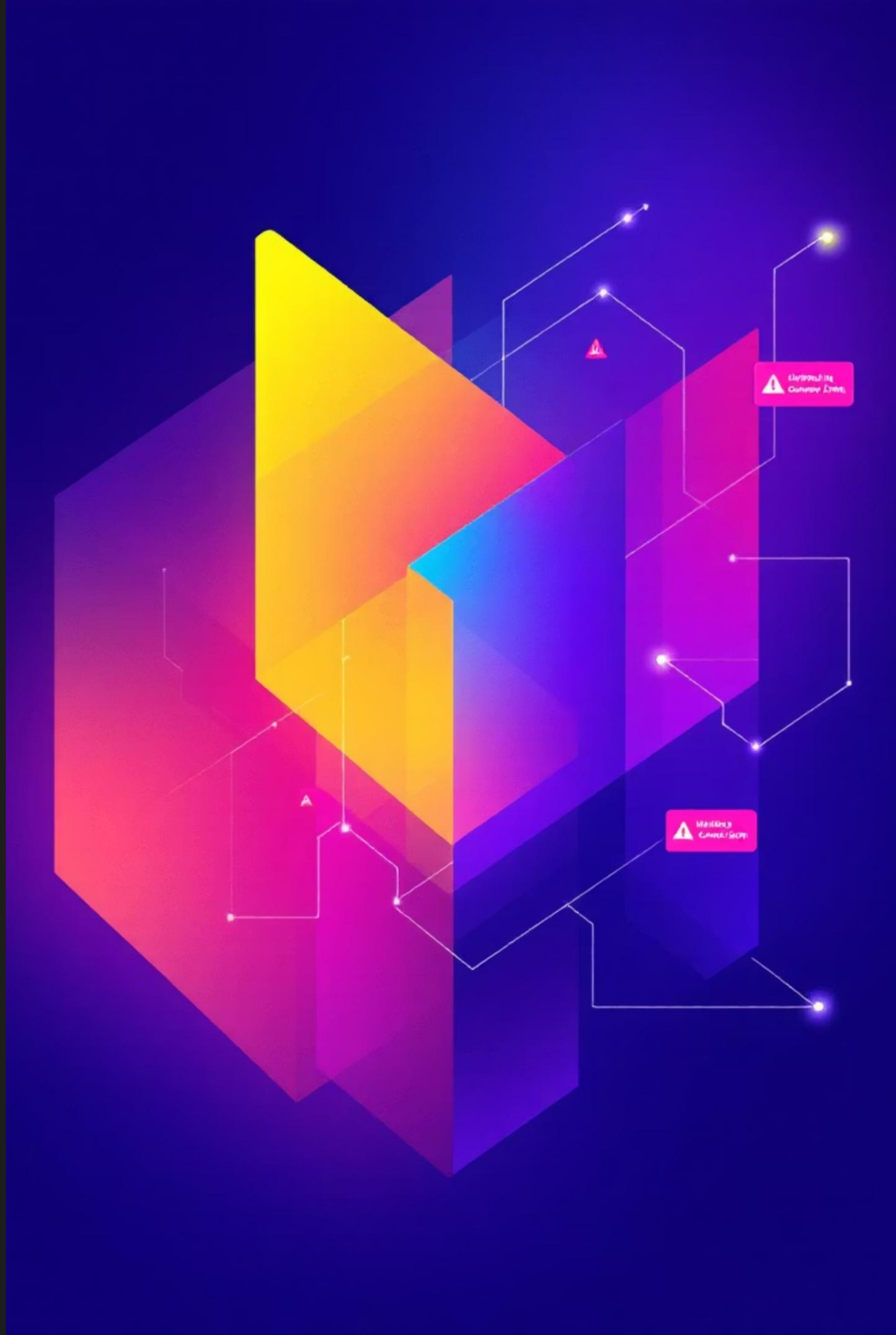
Usage of electronic checks correlates with higher churn.

Tenure

Short tenure customers are more likely to churn.

Service Gaps

Lack of tech support or online security services increases churn risk.



Strategic Insights for Retention

01

Promote Long-Term Contracts

Encourage customers to opt for 1-2 year contracts to improve stability.

02

Incentivize Automatic Payments

Drive adoption of bank transfer and credit card automatic payments.

03

Enhance Early Engagement

Focus on improving the customer experience during the initial tenure period.

04

Bundle Value-Added Services

Highlight the benefits of online security and tech support to reduce churn risk.