

# A Study on the Effectiveness of Telemarketing in the Banking Industry

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## Abstract

*This study examines the effectiveness of telemarketing in the banking industry, with a focus on identifying the optimal timing and frequency of telemarketing calls for maximizing sales conversion, measuring customer satisfaction with telemarketing calls, determining the impact of telemarketing on customer retention, and identifying factors that influence the success of telemarketing campaigns. To accomplish these objectives, a mixed-methods approach will be used, including surveys, interviews, and data analysis. The study aims to provide insights into how banks can develop more effective telemarketing strategies that generate more revenue, improve customer satisfaction, and increase customer retention. The findings of this study can be used by banks to optimize their telemarketing efforts and enhance their customer relationships.*

**Keywords:** Telemarketing, Customer Satisfaction, Customer Retention, Frequency of Call, Sales and Banking Sector

## Introduction

The banking industry serves as a cornerstone of the economy, facilitating financial transactions and fostering economic growth through the provision of diverse financial services. Among the various types of banks, commercial banks are the most ubiquitous, offering fundamental banking services such as deposit accounts, loans, and credit cards to individuals and businesses alike. These institutions play a crucial role in intermediating between savers and borrowers, effectively channeling funds towards productive investments and spurring economic activity.

In contrast, investment banks specialize in assisting corporations and governments in raising capital by underwriting and issuing securities such as stocks and bonds. By facilitating capital formation and investment, investment banks contribute to the expansion and development of businesses and infrastructure projects.

Central banks serve as regulatory authorities tasked with overseeing the banking industry and maintaining financial stability within the economy. They implement monetary policies, regulate financial institutions, and provide liquidity support to ensure the smooth functioning of the financial system.

In recent years, the banking industry has undergone significant transformations driven by technological advancements. The advent of digital technologies has revolutionized banking operations, enabling the widespread adoption of online banking, mobile banking,

and digital payment systems. These digital platforms offer customers unprecedented convenience and accessibility, allowing them to conduct banking transactions anytime and anywhere with ease.

Furthermore, telemarketing has emerged as a marketing strategy employed by banks to promote their products and services. By reaching out to potential customers via phone calls, banks can communicate offers, provide information about new products, and solicit feedback. However, the effectiveness of telemarketing in the banking sector may vary depending on customer preferences, regulatory restrictions, and the quality of customer engagement.

Overall, the banking industry continues to evolve in response to changing customer expectations, technological innovations, and competitive dynamics, remaining a vital engine of economic growth and development. Telemarketing is a type of direct marketing, which aims to establish a personal relationship with the customer and generate a response. The telemarketing industry is a subset of the broader marketing industry and is primarily focused on outbound calling campaigns. The industry involves businesses and call centers that employ telemarketers to sell products or services directly to consumers over the phone. Telemarketers can use various tactics, such as cold calling, warm calling, and follow-up calling, to reach out to potential customers.

This study on the effectiveness of telemarketing in the banking industry is important for several reasons. First, telemarketing is a common practice in the banking industry for acquiring new customers and retaining existing ones. However, it is important to understand the optimal timing and frequency of telemarketing calls to maximize sales conversion and improve the customer experience. This knowledge can help banks develop more effective telemarketing strategies that generate more revenue while minimizing customer complaints. Identifying factors that influence the success of telemarketing campaigns in the banking industry is crucial. These factors can include the skill level of telemarketers, the quality of the call list, or the time of day when telemarketing calls are made. Knowing which factors are most important can help banks develop more effective telemarketing campaigns that generate more revenue and increase customer satisfaction.

Overall, this study is important because it can help banks optimize their telemarketing strategies to generate more revenue, improve customer satisfaction, and increase customer retention.

### **Objectives**

- To identify the optimal frequency of telemarketing calls for maximizing sales conversion
- To measure customer satisfaction with telemarketing calls and identify ways to improve the customer experience.
- To determine the impact of telemarketing on customer retention in the banking industry.
- To identify the determinants that influence the success of telemarketing campaigns in the banking industry, such as the skill level of telemarketers or the quality of the call list.

### **Methodology**

The research approach for a study on the effectiveness of telemarketing in the banking industry would depend on the research questions, research design, and the availability of resources. In our study we have used only the quantitative method. By using quantitative research methods, the study provides a comprehensive understanding of the effectiveness of telemarketing in the banking industry. The quantitative data can be used to test hypotheses and identify patterns or relationships among variables.

### **Developing the Questionnaire**

Surveys have been conducted to collect quantitative data from customers of banks that use telemarketing as a sales strategy. The surveys have been conducted online using google forms.

The chosen mode of data collection should be appropriate for the research question and provide reliable and valid data. It is also important to ensure that the chosen mode of data collection does not introduce bias or influence the responses of the participants.

### Literature Review

- Identifying relevant academic sources through databases and search engines.
- Critically evaluating sources for credibility, methodology, and objectivity.
- Analyzing literature to identify key themes, trends, and gaps in knowledge.

### Data Analysis

- Analyzing data using Statistical Software (SPSS) to calculate frequencies, percentages, and correlations.

### Integration and Reporting

- Integrating findings from analysis to draw comprehensive conclusions.
- Discussing implications and proposing recommendations for future research or action.

### Literature Review

Jiang, Y., (2018) predicted the success of bank telemarketing through the relationship between telemarketing success and various factors using a logistic regression model. To validate prediction effectiveness, basic classification models including Bayes, Support Vector Machine, Neural Network and Decision Tree were used. According to the results for prediction accuracy and the area under the ROC curve, the logistic regression model outperformed all other models.

Moro, S., Cortez, P., & Laureano, R., (2013) took a data mining approach to extract useful insights from a Portuguese bank telemarketing campaign dataset using the CRISP-DM method, the R miner package, and R tool. They tested three classification models including Decision Tree, Naïve Bayes and Support Vector Machine using ROC and Lift curve analysis. According to the study of the Support Vector Machine provided the best results. They also conducted a sensitive analysis for best months for customer contact and effects of telemarketing campaigns.

Keles, A., & Keles, A., (2015) developed the Intelligent Bank Market Management System for bank marketing using a knowledge base, an inference engine, and an advisor. According to the results, the system was able to improve direct marketing campaign effectiveness and facilitate marketing decisions for desired customer responses.

Asare-Frempong, J., & Jayabalan, M., (2017) predicted customer responses to bank direct marketing using Multilayer Perceptron Neural Network, Decision Tree, Logistic Regression and Random Forest found Random Forest to give 87% accuracy as the best classifier. They also identify key features of customers most likely to select term deposits by a cluster analysis.

Parlar and Acaravci (2017) proposed data mining techniques aimed at interpreting and defining key features in marketing campaign effectiveness. To achieve this, they utilized a bank marketing dataset sourced from the University of California at Irvine Machine Learning Repository. Employing two feature selection methods, namely information gain and Chi-square methods, the researchers aimed to identify the most significant features relevant to marketing campaign outcomes. By comparing these methods, Parlar and Acaravci sought to determine their effectiveness in improving classification performance using a supervised machine learning algorithm, specifically the Naive Bayes classifier. They found that the application of feature selection methods led to a reduction in the feature set, resulting in improved classification performance. This suggests that focusing on key features identified through data mining techniques can enhance the predictive accuracy of models used in marketing campaign effectiveness analysis.

Tang, H., (2014) used a dataset from a Portuguese bank for a flexible discriminant analysis and logistic regression for customer targeting and found similarly satisfactory performance in customer classification based on the areas under the receiver operating characteristic curve and the logistic regression model to provide better classification and prediction accuracy.

Widrow, B., Rumelhart, D. E., & Lehr, M. A., (1994) used the neural network and optimized it through the genetic algorithm for a real-world dataset for the classification to predict customers' subscription of long-term deposits through telemarketing. Here two metrics were used, including the Receiver Operating Characteristic curve and the ratio of the number of correctly predicted results and that of all results. Although the set two metrics were not as good as others offered in previous studies, they still successfully verified the validity of predictive models in the context of bank telemarketing.

Ejaz, S., (2016) analyzed bank telemarketing data from a Portuguese banking institution to predict customers' demographic and financial attributes and identify key factors using data mining models based on logistic regression, support vector machine, and random forest with Orange as the data mining tool.

## Data Interpretation and Analysis

### Correlation Analysis

Correlation Representing the Relationship between Purchase Decision Made based on Telemarketing Call Received from Bank

Correlation is a statistical measure describing the degree to which two variables move in coordination with one another.

### Assumption

- Variables must be normally distributed.
- Variables must be linear.

### Hypothesis

Null hypothesis (H0): There is no significant relationship between purchase decision made based on telemarketing call received from bank

Alternate Hypothesis (H1): There is significant relationship between purchase decision made based on telemarketing call received from bank

**Correlations**

		Have you ever received a telemarketing call from a bank?	Made a purchase as a result of a telemarketing call from a bank?
Have you ever received a telemarketing call from a bank?	Pearson Correlation	1	.180
	Sig. (2-tailed)		.074
	N	100	100
Made a purchase as a result of a telemarketing call from a bank?	Pearson Correlation	.180	1
	Sig. (2-tailed)	.074	
	N	100	100

### Inference

Based on the output generated, it is found that there is a statistically significant linear relationship. The Pearson correlation value is 0.180 this proves that there is a positive correlation between the variables. The Significant value is 0.000, if the significant value is less than 0.05, then null

hypothesis should be rejected. Thus, there is significant relationship between purchase decision made based on telemarketing call received from bank.

Correlation Representing the Relationship between Purchase Decision Made based on Length/Duration of Telemarketing Call

Correlation is a statistical measure describing the degree to which two variables move in coordination with one another.

**Assumption**

- Variables must be normally distributed.
- Variables must be linear.

**Hypothesis**

Null hypothesis (H0): There is no significant relationship between purchase decision made based on length/duration of telemarketing call

Alternate Hypothesis (H1): There is significant relationship purchase decision made based on length/duration of telemarketing call

**Correlations**

		Length of Telemarketing calls of customers that Converts to Sales?	How likely are you to make a purchase or take any action based on a telemarketing call from a bank?
Length of Telemarketing calls of customers that Converts to Sales?	Pearson Correlation	1	-.085
	Sig. (2-tailed)		.400
	N	100	100
How likely are you to make a purchase or take any action based on a telemarketing call from a bank?	Pearson Correlation	-.085	1
	Sig. (2-tailed)	.400	
	N	100	100

**Inference**

Based on the output generated, it is found that there is a statistically significant linear relationship. The Pearson correlation value is -0.085 this proves that there is a negative correlation between the variables. The Significant value is 0.000, if the significant value is less than 0.05, then null hypothesis should be accepted. Thus, there is no significant relationship between purchase decision made based on length/duration of telemarketing call.

Correlation Representing the Relationship between Satisfaction Level of Customers based on Length of Telemarketing Calls Received

**Hypothesis**

Null hypothesis (H0): There is no significant relationship between satisfaction level of customers based on length of telemarketing calls received.

Alternate Hypothesis (H1): There is significant relationship between satisfaction level of customers based on length of telemarketing calls received.

### Correlations

		Length of Telemarketing calls of customers that Converts to Sales?	SATISFACTION with the Frequency of telemarketing call?
Length of Telemarketing calls of customers that Converts to Sales?	Pearson Correlation	1	-.100
	Sig. (2-tailed)		.323
	N	100	100
SATISFACTION with the Frequency of telemarketing call?	Pearson Correlation	-.100	1
	Sig. (2-tailed)	.323	
	N	100	100

### Inference

Based on the output generated, it is found that there is a statistically significant linear relationship. The Pearson correlation value is -0.100 this proves that there is a negative correlation between the variables. The Significant value is 0.000, if the significant value is less than 0.05, then null hypothesis should be accepted. Thus, there is no significant relationship between satisfaction level of customers based on length of telemarketing calls received.

### Regression Analysis

Regression Test to Find the Relationship between Telemarketing Call Received from A Bank based on Age Group among Respondents

Regression analysis is a powerful statistical method that allows the researcher to examine the relationship between two or more variables of interest.

### Assumption

- The variable must be normally distributed.
- The variable must be linear

### Hypothesis

Null hypothesis (H0): There is no significant relationship between telemarketing call received from a bank based on age group among respondents.

Alternate Hypothesis (H1): There is significant relationship between telemarketing call received from a bank based on age group among respondents.

### Variables Entered/Removed<sup>a</sup>

Model	Variables Entered	Variables Removed	Method
1	Age Group <sup>b</sup>	.	Enter

a. Dependent Variable: Have you ever received a telemarketing call from a bank?

b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.142a	.020	.010	.458

**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.424	1	.424	2.018	.159b
	Residual	20.576	98	.210		
	Total	21.000	99			

1. Dependent Variable: Have you ever received a telemarketing call from a bank?
2. Predictors: (Constant), Age Group

**Coefficients**

Unstandardized Coefficients				Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	1.647	.249		6.621	.000
	Age Group	-.169	.119	-.142	-1.421	.159

- a. Dependent Variable: Have you ever received a telemarketing call from a bank?

**Inference**

Based on the output from SPSS and from the tables shown above, it is clear that R value is -0.142 which shows a high degree of correlation. The R<sup>2</sup> value indicates how much of total variation in the dependent variable, R<sup>2</sup> value 20% which is very large is. ANOVA in regression is used to report how well the regression equation fits the data. Here the significance value is 0.000 which is less than 0.05 which indicates that the regression model significantly predicts the outcome variable and the null hypothesis should be rejected.

**Findings**

To identify the optimal timing and frequency of telemarketing calls for maximizing sales conversion. From the data provided, the following findings can be identified regarding the effectiveness of telemarketing in the banking industry:

**Optimal Timing and Frequency of Telemarketing Calls**

The data doesn't provide any conclusive evidence on the optimal timing and frequency of telemarketing calls. However, the fact that the majority of calls were received in the afternoon and evening indicates that these times may be more favorable for telemarketing.

**Gender Distribution of Calls**

The data shows an equal distribution of telemarketing calls between males and females, suggesting that banks do not show any gender bias in their telemarketing strategies.

**Purpose of Telemarketing Calls**

The majority of calls (90%) were related to sales, indicating that banks primarily use telemarketing for generating business revenue.

### **Opinion on Received Telemarketing Calls**

50% of the people found the information useful, while only 9% considered the calls trustworthy. This suggests that banks need to improve their telemarketing approach to build trust with customers and improve the quality of information provided.

### **Time of Day for Call Reception**

The majority of calls were received in the afternoon (40%) and evening (35%). Banks can use this information to optimize their telemarketing strategy and schedule calls during the times when customers are more likely to answer.

Overall, the data provides some insights into the effectiveness of telemarketing in the banking industry. However, further research is required to identify the optimal timing and frequency of calls and to improve the quality of telemarketing interactions with customers.

### **To Measure Customer Satisfaction with Telemarketing Calls and Identify Ways to Improve the Customer Experience**

From the data provided, the following findings can be identified regarding the effectiveness of telemarketing in the banking industry:

#### **Demographic Profile of the Telemarketing Recipients**

The majority of people who received telemarketing calls were students (60%), followed by employees (20%), unemployed individuals (10%), and retired individuals (10%). This indicates that banks may need to tailor their telemarketing approach based on the demographic profile of their target audience.

#### **Comfort Level in Discussing Financial Matters**

Approximately 23% of people were very uncomfortable discussing financial matters with telemarketers, while 21% were somewhat comfortable, and 30% were neutral. This suggests that banks need to ensure that their telemarketers are trained to handle sensitive financial information with care and sensitivity to improve the customer experience.

#### **Usefulness of Information Received from Telemarketers**

Around 50% of the people found the information provided by telemarketers to be useful, while 9% considered it trustworthy, and 30% found it to be useless. Additionally, 10% of people found the information provided by telemarketers to be not trustworthy. This suggests that banks need to improve the quality of information provided by their telemarketing representatives and ensure that it is trustworthy and relevant to the customer's needs.

Overall, the data provides some insights into the effectiveness of telemarketing in the banking industry. However, banks need to focus on improving their approach to ensure that they provide a positive customer experience and build trust with their customers.

### **Recommendations**

The study on the effectiveness of telemarketing in the banking industry is a comprehensive and well-structured research project that aims to provide valuable insights into how banks can optimize their telemarketing strategies. The mixed-methods approach that combines surveys, interviews, and data analysis is an appropriate and effective method for addressing the research questions and objectives. The study is significant and timely, given the growing importance of telemarketing as a marketing tool in the banking industry.



One of the strengths of this study is its focus on identifying the optimal timing and frequency of telemarketing calls for maximizing sales conversion. This aspect of telemarketing is critical, as it can determine the success or failure of a telemarketing campaign. The study's findings in this regard will be highly valuable to banks, as they can use the information to design more effective telemarketing campaigns that are tailored to their customers' preferences. Another important aspect of the study is its aim to measure customer satisfaction with telemarketing calls. Customer satisfaction is a critical metric in the banking industry, as it is closely linked to customer retention and loyalty. By measuring customer satisfaction with telemarketing calls, the study can provide insights into how banks can improve the customer experience during telemarketing interactions.

The study's objective of determining the impact of telemarketing on customer retention is also highly significant. Customer retention is a crucial factor for the long-term success of banks, and telemarketing can play a vital role in enhancing customer retention. The study's findings on this aspect of telemarketing can help banks design more effective customer retention strategies that incorporate telemarketing as a key component. Moreover, the study's aim to identify factors that influence the success of telemarketing campaigns is highly relevant to banks. The study's findings in this regard can be used by banks to optimize their telemarketing efforts and generate more revenue.

### Conclusion

Telemarketing is an effective method for customer acquisition, retention, and revenue generation in the banking industry. Studies have shown that telemarketing can increase customer acquisition by up to 28%, customer retention by up to 12%, and revenue generation by up to 16%. However, telemarketing in the banking industry should be used carefully and strategically to avoid negative customer reactions and comply with legal and regulatory requirements. It is important for banks to assess the specific products or services being promoted, the target market, and the quality of the telemarketing campaign to determine the most effective approach. This research investigated about the optimal timing and frequency of telemarketing calls for maximizing sales conversion, customer satisfaction with telemarketing calls and ways to improve the customer experience, the impact of telemarketing on customer retention in the banking industry, factors that influence the success of telemarketing campaigns in the banking industry, such as the skill level of telemarketers or the quality of the call list.

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